VOTORANTIM

2018 Consolidated financial statements and independent auditor's report

Votorantim S.A.

December 31, 2018

(A free translation of the original in Portuguese)

Independent auditor's report

To the Board of Directors and Stockholders
Votorantim S.A.

Opinion

We have audited the accompanying consolidated financial statements of Votorantim S.A. ("Company") and its subsidiaries, which comprise the consolidated balance sheet as at December 31, 2018 and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

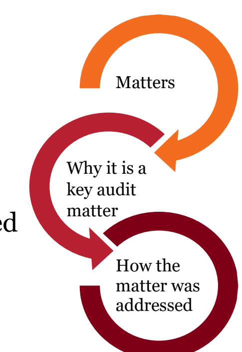
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Votorantim S.A. and its subsidiaries as at December 31, 2018, and their financial performance and cash flows for the year then ended, in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for opinion

We conducted our audit in accordance with Brazilian and International Standards on Auditing. Our responsibilities under those standards are further described in the “Auditor's responsibilities for the audit of the consolidated financial statements” section of our report. We are independent of the Company and its subsidiaries in accordance with the ethical requirements established in the Code of Professional Ethics and Professional Standards issued by the Brazilian Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.



Our audit for the year ended December 31, 2018 was planned and performed taking into consideration that the Company's operations did not present significant changes compared to the prior year.

In this context, the key audit matters, and our audit approach remained substantially in line with those from the prior year, except for the inclusion of the matters related to the asset held for sale - Fibria Celulose S.A. and the recording of the tax credits arising from the Social Integration Program (PIS) and the Social Contribution on Revenues (COFINS), referring to the exclusion of the Value-added Tax on Sales and Services (ICMS) from the calculation bases of these taxes.

Why it is a key audit matter	How the matter was addressed in the audit
Assessment of impairment of goodwill (Notes 16, 17 and 18)	
The Company has goodwill based on the expectation of future profitability from business combinations made in prior years totaling R$ 6,960 million (R$ 5,613 million recorded in Intangible assets and R$ 1,347 million recorded in Investments). Property, plant and equipment total R$ 26,180 million. The Company's management has to determine the recoverable value of the Cash-generating Units (CGUs) to which the goodwill has been ascribed. This requires it to apply critical judgments to determine that value, which is the higher of the fair value, net of selling expenses, and the value in use. The recoverable value is sensitive to changes in assumptions related to price and sales volume fluctuations, operating expenses, and determination of the appropriate discount rates, among other assumptions used in the calculations. Adverse economic and market conditions may significantly affect these assumptions.	In respect of this matter, we obtained an understanding of the existing key controls for this area and tested them. We also assessed the methodology that management uses to identify the Cash-generating units (CGUs). In addition, we assessed the reasonableness of management's main assumptions, including the discount rate used to determine the value in use or fair value net of selling and operating expenses, when applicable, and the growth rates for prices and volumes, by comparing them with available economic and industry-related estimates. Furthermore, with the support of our experts, we tested the mathematical accuracy of the calculations and data for the main assumptions used in the cash flow estimates, and to determine the discount rate. Through the sensitivity analyses of the main assumptions used, we also assessed whether the individual or cumulative changes would lead to impairment losses that could significantly exceed those recorded by the Company. After performing these audit procedures, we considered that the methodology used by management is consistent with the methodology adopted in prior years, and that the disclosures are consistent with data and information obtained through our procedures.
Realization of deferred income tax and social contribution tax assets (Note 21)	
The Company and its subsidiaries record deferred tax assets arising from temporary differences and income tax and social contribution losses, as well as credits from income tax and social contribution recoverable. These assets were recorded to the extent management considers that the Company will generate future taxable profit that is sufficient for the utilization of these credits.	In respect of this matter, we obtained an understanding of the key controls that the Company uses to calculate and record tax credits, and tested these controls, as well as the model used to estimate the future taxable profits, which were approved by the Company's management. We tested the calculations of tax credits and assessed the models and critical assumptions used

Why it is a key audit matter	How the matter was addressed in the audit
We considered this an area of focus in our audit since management's assessment of the realization of these assets involves important and subjective judgments to determine the future taxable bases for the utilization of these amounts.	by management to determine the future tax bases. We compared these assumptions with macroeconomic information available in the market and compared the information from these projections with budgets approved by the Company's governance bodies. In addition, we analyzed the realization periods considered in the Company's historical data and studies in order to test the adequacy and the consistency of these realization estimates in relation to those used in prior years. Finally, we assessed the disclosures related to the recognition of these tax credits. We consider that the criteria and assumptions that management adopted to determine the tax credits are reasonable in all material aspects in the context of the financial statements.
Provisions and contingent liabilities (Note 23) At December 31, 2018, the Company and its subsidiaries had recorded provisions calculated based on probable losses estimated in the respective proceedings. The Company and its subsidiaries also have tax, civil, environmental and labor proceedings in progress for which no provisions were recorded in the financial statements because management considered the likelihood of losses for these proceedings as possible or remote, based on the opinion of the Company's internal and external legal advisors. Management applies critical judgments to determine the likelihood of positive outcomes for proceedings in progress, as well as to estimate the probable losses, since these matters depend on future events that management is not able to control. In this context, the progress of these proceedings, at the several applicable levels, can differ from the results estimated by the management and its internal and external legal advisors, taking into account that changes in court directives or new case law may significantly affect management's estimates.	 In respect of this matter, we determined whether the procedures adopted by management to calculate the provisions and the related disclosures are in compliance with the related accounting policy. Furthermore, we obtained confirmation from the external legal advisors regarding the likelihood of loss for the major proceedings and the quantification of the amounts estimated as remote, possible and probable losses. We counted on the support of our tax experts to assess the reasonableness of the estimates prepared by management and its internal and external legal advisors for certain proceedings, considering their progress and the existing case law, when applicable. We consider that the criteria and assumptions used by management to determine the provisions, and the disclosures in the related explanatory notes are consistent with the information received during our audit.

Why it is a key audit matter	How the matter was addressed in the audit
Asset held for sale - Fibria Celulose S.A. (Note 34)	
On March 15, 2018, the Company entered into an agreement for the sale of its interest in associate Fibria Celulose S.A. to Suzano Holding S.A., maintaining a minority interest in the new combined operation resulting from this transaction. Accordingly, considering that the decision to sell this operation had already been made, the aforementioned investment is presented in the consolidated financial statements as an asset held for sale, and stated at its carrying amount on the agreement date, since the fair value of the operation exceeds the carrying amount of the investment. We considered this as an area of focus in our audit due to the significance of the amounts that have an important impact on the financial statements, and the judgments by management in relation to the amount to be presented as an asset held for sale in the consolidated financial statements.	We verified if the transaction carried out was in compliance with the conditions for its classification as a discontinued operation, and the measurement of the asset classified as held for sale at the lower of its carrying amount and fair value less selling expenses, according to the accounting standards. In our procedures, we did not identify inconsistencies in the recognition of the effects of the transaction in the financial statements and disclosures of the asset classified as a discontinued operation.
ICMS on the calculation bases of PIS and COFINS (Notes 1.1(g) and 30)	
The Company recognized, in the year ended December 31, 2018, R$ 550 million referring to the tax credits arising from the exclusion of the Value-added Tax on Sales and Services (ICMS) from the calculation bases of the Social Integration Program (PIS) and the Social Contribution on Revenues (COFINS), with projection of conversion into cash in five years. We considered this an area of focus in our audit since the recording of credits, as well as the assessment of their realization, required important and subjective judgments from management.	In response to this matter, we obtained the legal opinions from the Company's external legal advisors, and involved our tax experts in the assessment of the risks involved in the recognition and realization of these credits. We verified, on a test basis, the calculations of tax credits, and the models and critical assumptions used by management to determine the amounts recognized. We consider that the criteria and assumptions used by management to determine the tax credits, and the disclosures in the related explanatory notes are consistent with the information received during our audit.

Other matters

Statements of Value Added

The consolidated statement of value added for the year ended December 31, 2018, prepared under the responsibility of the Company's management and presented as supplementary information for IFRS purposes, was submitted to audit procedures performed in conjunction with the audit of the Company's consolidated financial statements. For the purposes of forming our opinion, we evaluated whether this statement was reconciled with the financial statements and accounting records, as applicable, and if its form and content were in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". In our opinion, this statement of value added has been properly prepared in all material respects, in accordance with the criteria established in the Technical Pronouncement, and is consistent with the consolidated financial statements taken as a whole.

Other information accompanying the consolidated financial statements and the independent auditor's report

The Company's management is responsible for the other information that comprises the Management Report, which is expected to be received after the date of this report.

Our opinion on the consolidated financial statements does not cover the Management Report, and we do not express any form of audit conclusion thereon.

In connection with the audit of the consolidated financial statements, our responsibility is to read the Management Report and, in doing so, consider whether this report is materially inconsistent with the financial statements or with our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, after reading the Management Report, we conclude that there is a material misstatement in this report, we are required to report that fact.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting practices adopted in Brazil and with the IFRS as issued by the International Accounting Standards Board (IASB), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the financial reporting process of the Company and its subsidiaries.

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Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Brazilian and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Brazilian and International Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud could involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company and its subsidiaries.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Company to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

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We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Curitiba, March 8, 2019

PricewaterhouseCoopers

PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5

Carlos Eduardo Guaraná Mendonça
Contador CRC 1SP196994/O-2

Summary
Consolidated financial statements

Statements

General considerations

Liabilities and equity

Estimates and assumptions

Results

Assets

Supplemental information

All amounts in millions of reais

	Note	2018	2017
Assets			
Current assets			
Cash and cash equivalents	9	7,667	9,177
Financial investments	10	3,390	3,345
Derivative financial instruments	6.1.1 (a)	216	52
Trade receivables	11	2,546	2,421
Inventory	12	3,814	3,526
Taxes recoverable	13	1,473	1,317
Dividends receivable	14	14	148
Financial instruments - firm commitment	15	202	210
Other assets		564	784
		19,886	20,980
Assets classified as held-for-sale	34	4,527	2,199
		24,413	23,179
Non-current assets			
Long-term receivables			
Financial investments	10	23	25
Derivative financial instruments	6.1.1 (a)	256	138
Financial instruments - put option	6.1.1 (b)	744	
Taxes recoverable	13	2,731	1,784
Related parties	14	271	143
Deferred income tax and social contribution	21 (b)	4,079	4,079
Judicial deposits	23 (b)	755	765
Financial instruments - firm commitment	15		154
Other assets		685	667
		9,544	7,755
Investments	16 (c)	10,882	13,372
Property, plant and equipment	17	26,180	26,223
Intangible assets	18	13,341	12,075
Biological assets		74	65
		60,021	59,490
Total assets		84,434	82,669

All amounts in millions of reais

	Note	2018	2017
Liabilities and equity			
Current liabilities			
Borrowing	19 (a)	5,291	2,573
Derivative financial instruments	6.1.1 (a)	166	299
Confirming payables	20	1,187	909
Trade payables		4,262	3,514
Salaries and payroll charges		845	895
Taxes payable		490	617
Advances from clients		128	408
Dividends payable	14	482	188
Use of public assets	24	83	76
Financial instruments - firm commitment	15	19	1
Deferred revenue - performance obligations	22	242	246
Deferred revenue - silver streaming		124	104
Other liabilities		808	643
		14,127	10,473
Liabilities related to assets held-for-sale	34	108	1,526
		14,235	11,999
Non-current liabilities			
Borrowing	19 (a)	19,160	22,057
Derivative financial instruments	6.1.1 (a)	78	83
Deferred income tax and social contribution	21 (b)	2,199	1,965
Related parties	14	136	25
Provision	23 (a)	2,595	2,587
Use of public assets	24	1,106	1,056
Pension plan and post-employment health care benefits	25	319	320
Financial instruments - firm commitment	15	161	207
Deferred revenue - performance obligations	22	29	272
Deferred revenue - silver streaming		650	630
Other liabilities		924	653
		27,357	29,855
Total liabilities		41,592	41,854
Equity			
Share capital	26 (a)	28,656	28,656
Revenue reserves		7,088	6,569
Carrying value adjustments	26 (c)	1,475	733
Total equity attributable to the owners of the Company		37,219	35,958
Non-controlling interests		5,623	4,857
Total equity		42,842	40,815
Total liabilities and equity		84,434	82,669

The accompanying notes are an integral part of these consolidated financial statements.

All amounts in millions of reais unless otherwise stated

	Note	2018	2017 Restyled (Note 2.3)
Continuing operations			
Net revenue from products sold and services rendered	27	31,948	26,799
Cost of products sold and services rendered	28	(25,909)	(21,171)
Gross profit		**6,039**	**5,628**
Operating income (expenses)			
Selling	28	(775)	(701)
General and administrative	28	(2,173)	(2,013)
Other operating income (expenses), net	30	550	(553)
		(2,398)	**(3,267)**
Operating profit before equity results and finance results		**3,641**	**2,361**
Results from equity investments			
Equity in the results of investees	16 (c)	814	1,219
Dividends received	34 (a)	820	
Realization of other comprehensive income on disposal of investments		4	3
		1,638	**1,222**
Finance results, net	31		
Finance income		1,261	1,153
Finance costs		(2,531)	(2,705)
Result of derivative financial instruments		204	(213)
Foreign exchange losses, net		(977)	(724)
		(2,043)	**(2,489)**
Profit before income tax and social contribution		**3,236**	**1,094**
Income tax and social contribution	21 (a)		
Current		(456)	(722)
Deferred		(608)	586
Profit from continuing operations		**2,172**	**958**
Discontinued operations			
Loss on discontinued operations		(218)	(148)
Profit for the year attributable to the owners of the Company		**1,954**	**810**
Profit attributable to the owners of the Company		1,746	590
Profit attributable to non-controlling interests		208	220
Profit for the year		**1,954**	**810**
Weighted average number of shares - thousands (to the owners of the Company)		18,278,789	18,278,789
Basic and diluted earnings per thousand shares, in reais		**95.52**	**32.28**
From continuing operations			
Basic and diluted earnings per thousand shares, in reais		**107.45**	**40.38**
From discontinued operations			
Basic and diluted loss per thousand shares, in reais		**(11.93)**	**(8.10)**

All amounts in millions of reais

	Note	2018	2017
Profit for the year		**1,954**	**810**
Other components of comprehensive income to be subsequently reclassified to profit or loss			
Attributable to the owners of the Company			
Foreign exchange variations attributable to the owners of the Company	26 (c)	1,555	473
Hedge accounting for net investments abroad, net of taxes	6.1.3 e 26 (c)	(931)	(163)
Hedge accounting for the operations of subsidiaries	26 (c)	158	(101)
Fair value of financial assets available-for-sale of the non-consolidated investments	26 (c)	(74)	39
Realization of comprehensive income on the disposal of investments	26 (c)	(4)	(136)
Realization of comprehensive income on the sale of interest in Nexa Resources S.A.	26 (c)		(419)
Share in other comprehensive income of investees	26 (c)	3	
Attributable to non-controlling			
Foreign exchange variations attributable to non-controlling interests		714	94
Hedge accounting for the operations of subsidiaries			17
Share in other comprehensive income of investees		(1)	60
		1,420	**(136)**
Other components of comprehensive income that will not be reclassified to profit or loss			
Attributable to the owners of the Company			
Remeasurement of retirement benefits, net of tax effects	26 (c)	34	1
Attributable to non-controlling			
Remeasurement of retirement benefits, net of taxes		2	(1)
Other components of comprehensive income for the year		**1,456**	**(136)**
Comprehensive income (loss) from			
Continuing operations		3,628	822
Discontinued operations		(218)	(148)
		3,410	**674**
Comprehensive income attributable to			
Owners of the Company		2,487	284
Non-controlling interests		923	390
		3,410	**674**

The accompanying notes are an integral part of these consolidated financial statements.

All amounts in millions of reais unless otherwise stated

		Attributable to the owners of the Company								
			Revenue reserves							
	Note	Share capital	Tax incentives	Legal	Profit retention	Retained (loss) earnings	Carrying value adjustments	Total	Non-controlling interests	Total equity
At January 1, 2017		**28,656**	**10**	**654**	**5,590**		**1,255**	**36,165**	**2,658**	**38,823**
Profit for the year						590		590	220	810
Other comprehensive income							(306)	(306)	170	(136)
Comprehensive income for the year						**590**	**(306)**	**284**	**390**	**674**
Increase of non-controlling shareholders - Nexa - dilution of interest							(215)	(215)	1,075	860
Increase of non-controlling shareholders - Nexa - sale of interest									957	957
Allocation of net income for the year										
Legal reserve				30		(30)				
Dividends	26 (b)				(135)	(140)		(275)	(224)	(499)
Profit retention					420	(420)				
Total contributions and distributions to shareholders				**30**	**285**	**(590)**	**(215)**	**(490)**	**1,808**	**1,318**
At December 31, 2017		**28,656**	**10**	**684**	**5,875**		**734**	**35,959**	**4,856**	**40,815**
Initial adoption of IFRS 9	**3.1.2**					(342)		(342)		(342)
Initial Application of FIPs, net of taxes - Banco Votorantim S.A.						(116)		(116)		(116)
At January 1, 2018, after the impacts of the adoption of IFRS 9 and FIPs		**28,656**	**10**	**684**	**5,875**	**(458)**	**734**	**35,501**	**4,856**	**40,357**
Initial adoption of IAS 29	**1.1 (e)**					**295**		**295**		**295**
Profit for the year						1,746		1,746	208	1,954
Other comprehensive income							741	741	715	1,456
Comprehensive income (loss) for the year						**1,746**	**741**	**2,487**	**923**	**3,410**
Allocation of net income for the year										
Legal revenue				87		(87)				
Dividends	26 (b)				(789)	(415)		(1,204)	(61)	(1,265)
Profit retention					1,081	(1,081)				
Votorantim Cimentos EAA Inversiones S.L. ("VCEAA") non-controlling interests aquisition										
Reversal of deliberate dividends	26 (b)				140			140		140
Share premium distribution - NEXA	1.1 (b)								(95)	(95)
Total contributions and distributions to shareholders				**87**	**432**	**(1,583)**		**(1,064)**	**(156)**	**(1,220)**
At December 31, 2018		**28,656**	**10**	**771**	**6,307**		**1,475**	**37,219**	**5,623**	**42,842**

All amounts in millions of reais

	Note	2018	2017
Cash flow from operating activities			
Profit before income tax and social contribution		3,236	1,094
Loss on discontinued operations		(218)	(148)
Adjustments to items that do not represent changes in cash and cash equivalents			
Discontinued Operations - China, California and Florida			(23)
Realization of other comprehensive income - financial results	31		331
Net gain on sale of investment	30	(123)	(625)
Depreciation, amortization and depletion	28	2,470	2,325
Equity in the results of investees	16 (c)	(814)	(1,219)
Deliberation of interim dividends of Fibria	34 (a)	(820)	
Interest, indexation and foreign exchange variations		501	2,006
Reversal for the impairment of fixed, intangible assets and investments	16, 17, 18	(52)	(23)
Gain on sales of fixed and intangible assets, net	30	(42)	(4)
Fair value adjustment	19 (b)	(28)	47
Constitution (reversal) of provision		120	(278)
Derivative financial instruments	6.1.1 (c)	(162)	(319)
Financial instruments - firm commitment	15	132	522
Gain in fair value in VTRM´s operation	30	(300)	
Net gain from financial instrument - put option	31	(71)	
Gain on debt renegotiation	31	(69)	
Tax recovery	30	(498)	
Change in fair value of biological assets			8
		3,262	**3,694**
Decrease (increase) in assets			
Financial investments		346	442
Derivative financial instruments		(92)	(202)
Trade accounts receivable		(168)	(420)
Inventory		(293)	(130)
Taxes recoverable		(262)	12
Related parties		(17)	395
Other accounts receivable and other assets		50	(358)
Increase (decrease) in liabilities			
Trade payables		778	630
Salaries and social charges		(50)	47
Use of public assets		(13)	(84)
Taxes payable		31	160
Other obligations and other liabilities		200	171
Cash provided by operating activities		**3,772**	**4,357**
Interest paid on borrowing and use of public assets		(1,461)	(1,558)
Income tax and social contribution paid		(614)	(688)
Net cash provided by operating activities		**1,697**	**2,111**

The accompanying notes are an integral part of these consolidated financial statements.

All amounts in millions of reais

	Note	2018	2017
Cash flow from investment activities			
Proceeds from disposals of fixed and intangible assets		177	178
Resources from the public offering and sale of shares of Nexa			1,762
Investment sale - China, California and Florida			1,937
Investment sale	1.1 (i)	419	
Dividends received		1,085	540
Acquisitions of property, plant and equipment	17	(2,567)	(3,108)
Acquisitions of investments		(125)	
Increase in biological assets		(9)	(4)
Increase in intangible assets	18	(115)	(174)
Net cash provided by (used in) investment activities		**(1,135)**	**1,131**
Cash flow from financing activities			
New borrowing	19 (b)	3,665	5,399
Repayment of borrowing	19 (b)	(5,532)	(5,881)
Derivative financial instruments	6.1.1 (a)	(11)	(561)
Dividends paid		(789)	(359)
Dividends paid to non-controlling		(61)	
Share premium Nexa paid		(95)	
Net cash used in financing activities		**(2,823)**	**(1,402)**
Increase (decrease) in cash and cash equivalents		**(2,261)**	**1,840**
Effect of companies excluded from consolidation		(109)	
Effect of fluctuations in exchange rates		860	391
Cash and cash equivalents at the beginning of year		**9,177**	**6,946**
Cash and cash equivalents at end of year		**7,667**	**9,177**
Non-cash transactions			
Non-cash impact Special Program of Tax Regulation ("PERT") debits			(259)

The accompanying notes are an integral part of these consolidated financial statements.

All amounts in millions of reais

	Note	2018	2017
Revenue			
Sales of products and services		36,510	31,362
Estimated loss on doubtful accounts	11 (c)	(15)	
Other operating income (expenses), net		550	(553)
		37,045	**30,809**
Inputs acquired from third parties			
Raw materials and other production inputs		(21,405)	(17,056)
Materials, energy, outsourced services and others		(660)	(517)
Impairment of assets	30	52	23
Gross value added		**15,032**	**13,259**
Depreciation, amortization and depletion	28	(2,470)	(2,325)
Net value added generated by the Company		**12,562**	**10,934**
Value added received through transfers			
Equity in the results of investees		1,634	1,219
Finance income and foreign exchange losses		5,204	2,277
		6,838	**3,496**
Total value added to distribute		**19,400**	**14,430**
Distribution of value added			
Personnel and payroll charges	29		
Direct remuneration		2,951	2,469
Social charges		1,040	947
Benefits		709	600
		4,700	**4,016**
Taxes and contributions			
Federal		2,277	2,491
State		2,220	2,604
Municipal		15	13
Deferred taxes		608	(586)
		5,120	**4,522**
Third-party capital remuneration			
Finance costs and foreign exchange losses		7,247	4,766
Rentals		379	316
		7,626	**5,082**
Own capital remuneration			
Non-controlling interests		208	220
Dividends		1,265	499
Reinvested profits		699	239
Loss on discontinued operations	34 (c)	(218)	(148)
		1,954	**810**
Value added distributed		**19,400**	**14,430**

1 General considerations

Votorantim S.A. (the "Company", the "parent company", or "VSA"), is a long-term Brazilian holding company. With its headquarters in the city of São Paulo, Brazil, the Company's purpose is to manage assets and companies, as well as to invest in other companies in order to further its objectives.

The Company, through its subsidiaries and associates, operates in the following segments: construction, metals and mining, aluminum, electrical energy, long steel, agribusiness and finance.

1.1 Main events that occurred during the year 2018

(a) Votorantim and ArcelorMittal conclude long steel operation Brazil

On February 22, 2017, ArcelorMittal Brasil S.A. (“AMB”) and VSA entered into an agreement under which Votorantim Siderurgia S.A. (“VS”) will become a subsidiary of AMB and VSA will hold a minority interest of 15% in the combined long steel business.

On February 7, 2018, the Administrative Council for Economic Defense (“CADE”) approved this, pursuant to Concentration Act 08700.002165/2017-97.

As at April 1, 2018, VS became a subsidiary of AMB under the corporate name of ArcellorMital Sul Fluminense S.A.. On the same date, the Company received 15% of the combined long steel business of AMB, which, in compliance with accounting rules, was recognized at fair value as a financial instrument, in accordance with CPC 48 – “Financial Instruments”.

Votorantim's long steel operations in Argentina (Acerbrag) and Colombia (PazdelRío) were not included in the transaction and continue to be consolidated in the Company’s financial statements.

(b) Reimbursement of share premium Nexa Resources S.A.

On February 15, 2018, the Board of Directors approved the reimbursement of a share premium of US$ 0.60 cents per ordinary share to shareholders, of which R$ 171 was to controlling shareholders and R$ 95 was to non-controlling shareholders of record at the close of business on March 14, 2018 and this was paid on March 28, 2018.

(c) Fibria Celulose S.A. corporate reorganization

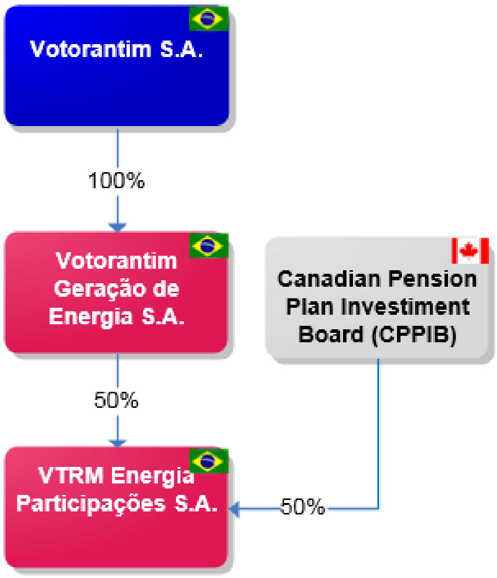
On March 15, 2018, the Company together with BNDES Participações SA - BNDESPAR (jointly, the "Controlling Shareholders of Fibria") entered into an agreement with Suzano Holding SA and other controlling shareholders of Suzano Papel e Celulose SA ("Suzano") (jointly, the" Suzano controlling shareholders"), to combine the operations and shareholding bases of Fibria and Suzano, through a corporate reorganization, (Note 34 (a)).

(d) Formation of joint venture with strategic investor

All regulatory approvals were obtained on May 29, 2018 and the compliance was achieved in all conditions precedent necessary to carry out the operations set forth in the Subscription and Investment Agreement entered into by Votorantim Geração de Energia S.A. ("VGE") and the Canadian Pension Plan Investment Board ("CPPIB"), and in the Share Purchase and Sale Agreement entered into by VGE, CPPIB and Salus - Investment Fund for Multistrategy Holdings, both executed on December 13, 2017.

Additionally, on May 29, 2018, VGE and CPPIB resolved at an extraordinary shareholders' meeting a capital increase in the investee VTRM in the amount of R$ 49 and R$ 664, respectively, through issuance of 25,689 and 345,737 thousand common shares, respectively, at an issue price of R$ 1.92. This capital increase generated a significant increase in investment, in the amount of R$ 155, which was recognized as a contra entry to the item "Other operating income (expenses), net" (Note 30).

After the completion of the operation, VGE ceased to have a 100% stake and consequently control over VTRM and its subsidiaries. It came to hold joint control in this investment platform ("joint venture") with CPPIB, since both investors have a 50% interest in this company and all strategic, financial and operational decisions must be taken unanimously. As a result of the loss of control and maintenance of shared control, VGE ceased to consolidate the previous investment in VTRM and its subsidiaries on May 29, 2018, and recorded the remaining portion of the investment at fair value, recognizing a gain of R$ 147 under the item "Other operating income (expenses), net" (Note 30). After the initial registration, the investment in the joint venture was recognized using the equity method, as follows:



All amounts in millions of reais unless otherwise stated

The balances of the subsidiary VGE at the periods ended of operation on May 29, 2018 were as follows:

	5/29/2018		5/29/2018
Assets		**Liabilities and equity**	
Current assets		Current liabilities	
Cash and cash equivalents	14	Borrowing	65
Financial investments	68	Trade payables	4
Trade receivables	19	Taxes payable	2
Other assets	7	Other liabilities	6
	108		77
Non-current assets		Non-current liabilities	
Long-term receivables		Borrowing	843
Liquidity Fund - Reserve Account	3	Related parties	83
Other assets	10	Provision	21
	13	Other liabilities	23
			970
Investments	713	Total liabilities	1,047
Property, plant and equipment	1,189		
Intangible	42	**Equity**	
	1,944	Share capital	699
		Capital reserves	334
		Loss earnings	(15)
		Total equity	1,018
Total assets	2,065	Total liabilities and equity	2,065

All amounts in millions of reais unless otherwise stated

(e) Adjustment of Argentina's hyperinflationary economy

As at July 1, 2018, Argentina's economy was framed by a hyperinflationary economy, with accumulated inflation in excess of 100% in the last three years, accompanied by a high degree of devaluation of the Argentine peso ("ARS"). According to IAS 29 (Financial Reporting in Hyperinflationary Economies), the positive effect of the ARS devaluation was recognized in the consolidated in the amount of R$ 250, and the positive effect of the initial inflation adjustment on the investment balance was in the amount of R$ 295, recorded as a contra entry to "Retained earnings" in shareholders' equity and negative effect, in the amount of R$ 45, recognized in the consolidated result.

Statement of income	IAS 29 effect
Net revenue from products sold	145
Cost ofproducts sold	(88)
Gross profit	**57**
Operating income (expenses)	
General and administrative	(33)
	(33)
Operating profit before equity results and finance results	**24**
Results from equity investments	
Equity in the results of investees	(26)
	(26)
Finance result, net	**(28)**
Profit before income tax and social contribution	**(30)**
Income tax and social contribution	**(15)**
Loss for the year	**(45)**

Balance sheet	IAS 29 effect
Cementos Avellaneda S.A.	168
Acergroup S.A.	79
Acerholding S.A.	48
	295

(f) Cementos Portland S.A. ("CEMPOR") investment sale

On October 4, 2018, the subsidiary Votorantim Cimentos S.A. ("VCSA") and Cementos Bio Bio SA ("CBB"), as partners of CEMPOR, entered into a contract for the sale of all shares representing the company's share capital, in accordance with their respective shares equivalent to 50% of CEMPOR's quotas (R$ 59), as described in Note 16 (c).

On October 10, 2018, the sale was concluded and the subsidiary VCSA registered a loss related to the sale of the investment in the amount of R$ 4, registered in "Other operating income (expenses), net", as described in Note 30, consequently, realized the write-off of R$ 4 related to the exchange variation on investments abroad, which was recognized in "Realization of other comprehensive income of investees."

(g) Acquisition of control of Companhia Energética de São Paulo ("CESP") by VTRM

On October 19, 2018, the joint venture (VTRM) consortium formed by VGE and the Canadian fund CPPIB acquired a shareholding control of CESP through the acquisition of 80.2% of the common shares and 13.7% of the Class B preferred shares. The consortium offered R$ 14.60 per share, corresponding to 35.6% of the total capital of CESP, representing a total offer of R$ 1.7 billion.

This transaction is aligned with the growth objectives of the joint venture in renewable energy generation in Brazil, and will add 1.6 GW of installed capacity to the already existing portfolio of 564 MW of installed generation capacity coming from wind farms Ventos do Piauí I and Ventos do Araripe III.

As foreseen in the bid announcement, after the transfer of control, a new concession of the Porto Primavera Hydroelectric Power Plant will be granted to CESP for 30 years, upon payment of a pre-established grant in the amount of R$ 1.4 billion.

In addition, the consortium undertakes to make a public offering for the acquisition of Class B common and preferred shares remaining in accordance with the terms of the bid announcement, CESP's Bylaws, current legislation and applicable CVM regulations.

On December 11, 2018, the transaction was executed based on the purchase and sale agreement recognized by the parties, in which all conditions for the conclusion of the transaction were determined.

(h) State Value-Added Tax on Sales and Services ("ICMS") from the basis of calculation of the PIS and COFINS contributions

In the fourth quarter of 2018, based on the final decision of the Federal Regional Court (“TRF”), the subsidiaries VCSA and Nexa BR registered in the asset the right to recover federal tax credits in the amount of R$ 781 (Note 13), being the principal amount of R$ 438 corresponding to the principal registered in "Other income (expenses), net" (Note 30) and the amount of R$ 343 corresponding to interest registered in "Net financial income" (Note 31).

(i) Sale of Indirect subsidiary US Zinc Corporation

In December 2018, the subsidiary FinCo GmbH (“FinCo”) sold all of the shares of the indirect subsidiary U.S. Zinc Corporation, which operated in the production and commercialization of zinc, to the investment fund Aterian Investment Partner.

The transaction between the parties ended on December 26, 2018, for the amount of R$ 449 (USD 116), corresponding to operations in the United States, China and the Netherlands Antilles. As a result of the sale, the Company received R$ 419 and registered a gain of R$ 126 (USD 31), recognized under "Other operating income (expenses), net" (Note 30).

(j) Corporate reorganization of subsidiary VCSA

During the second semester of 2018, the subsidiary VCSA undertook a corporate reorganization in order to transfer international investments directly and indirectly held by the subsidiary VCSA to a holding company incorporated in Luxembourg, Votorantim Cimentos International S.A. ("VCI"). The corporate reorganization was carried out to strengthen Votorantim Cimentos' position as an international player, ensuring greater efficiency in the operation, benefiting global governance strategies, strengthening its capital structure, maximizing growth opportunities in several regions and increasing Group access to international markets.

VCI is a wholly-owned subsidiary of the subsidiary VCSA, as well as the investments transferred during the process, and therefore, the corporate reorganization occurred between jointly controlled companies. The assets and liabilities transferred - the contribution by VCSA of all its investment and goodwill in the subsidiary Votorantim Cimentos EAA Inversiones, SL ("VCEAA"), and substitution of the issuer ("Substitution of the issuer") of the debts 3.25% Senior Notes maturing in 2021, 3.50% Senior Notes maturing in 2022 and 7.25% Senior Notes maturing in 2041 from subsidiary VCSA to VCI, for which the subsidiary VCSA became the guarantor - by the effects of the reorganization were recorded at historical cost, as previously recorded in the financial statements of subsidiary VCSA. There was no recording of any goodwill or other difference between the cost of the transaction and the book value, and the difference between the assets and liabilities transferred was recorded in VCI's shareholders' equity.

(k) Reclassification of India operations for “discontinued operations result”

In November 2018, the subsidiary VCSA, with its subsidiary VCEAA, entered into an agreement to sell all the operations in India. As a consequence, were reclassified to discontinued operations, in the statement of income for the years ended December 31, 2017 (Note 2.3) and 2018 (Note 34 (c)), the amounts of R$ (3) and R$ 22, respectively, referring to the result of the year generated by operations in India. The VCEAA registered a loss related to the sale of the investment in the amount of R$ (80), registered in "Discontinued operations result" in Note 34 (c). In addition, balances related to the subsidiary Shree Digvijay Cement Co Limited, in the net amount of R$ 112, were classified as available for sale in the balance sheet (Note 34).

2 Presentation of the consolidated financial statements

2.1 Basis of preparation

(a) Consolidated financial statements

The financial statements have been prepared in accordance with accounting practices adopted in Brazil effective up to December 31, 2018 , including the pronouncements issued by the Brazilian Accounting Pronouncements Committee (“CPC”), as well as according to the International Financial Reporting Standards (“IFRS”) issued by the International Accounting Standards Board (“IASB”) and their interpretations (“IFRIC”), and show all relevant information pertinent to interim financial statements, which is consistent with that used by the management in carrying out its duties.

The Company voluntarily discloses its consolidated statement of value added, according to the accounting practices adopted in Brazil, applicable to public companies and presented as an integral part of these financial statements. To international practice, this statement is presented as additional information.

The preparation of these consolidated financial statements considered the historical cost basis, which in the case of certain financial assets and liabilities, including derivative instruments, is adjusted to reflect the fair value measurement.

The financial statements require the use of certain critical accounting estimates. It also requires management to exercise judgment in the process of applying the Company’s accounting policies. The areas involving a higher degree of judgment or complexity or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

(b) Approval of the financial statements

The Board of Directors approved the consolidated financial statements for issue on March 8, 2019.

2.2 Consolidation

(a) Subsidiaries

Subsidiaries are fully consolidated from the date on which control is transferred to the Company.

Transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated, unless the transaction provides evidence of impairment of the asset transferred. Accounting policies of acquired subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Company.

(b) Transactions with non-controlling interests

The Company treats transactions with non-controlling interests as transactions with equity owners of the Company. For purchases from non-controlling interests, the difference between any consideration paid and the proportion acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded directly in equity, in "Profit retention reserves".

(c) Loss of control of subsidiaries

When the Company ceases to have control, any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognized in profit and loss. The amounts previously recognized in carrying value adjustments are reclassified to profit and loss.

(d) Associates and joint arrangements

Joint operations are accounted for in the financial statements in order to represent the Company's contractual rights and obligations. Therefore, the assets, liabilities, revenues and expenses related to its interests in joint operations are individually accounted for in its financial statements.

Investments in associates and joint ventures are accounted for using the equity method and are initially recognized at cost.

The Company's investments in associates and joint ventures includes goodwill identified on acquisition, net of any accumulated impairment loss.

Dilution gains and losses on investments in associates and joint ventures are recognized in the statement of income.

2.3 Restatement of comparative figures

In accordance with IFRS 5/CPC 31 - "Non-current assets held-for-sale and discontinued operations", the Company reclassified certain cement operations from India, from continuing operations to discontinued operations.

Also due to the application of IFRS 15/CPC 47 – "Revenue from contracts with customers", there were changes in accounting practices that resulted in reclassifications of the December 31, 2017 result, as described in Note 3.1.

All amounts in millions of reais unless otherwise stated

							2017
	As prior presented	Impacts of reclassification of Votorantim Cimentos	Elimination of intragroup energy revenue	Reclassification of mineral exploration projects - Nexa	Reclassification of depletion expenses - US Zinc	Reclassification of CPC 47 / IFRS 15	Balance restated
Continuing operations							
Net revenue from products sold and services rendered	27,225	(176)	(250)				26,799
Cost of products sold and services rendered	(20,649)	182	250	16	(38)	(932)	(21,171)
Gross profit (loss) profit	**6,576**	**6**		**16**	**(38)**	**(932)**	**5,628**
Operating income (expenses)							
Selling	(1,666)	4			38	923	(701)
General and administrative	(2,018)	5		(16)		16	(2,013)
Other operating expenses, net	(536)	(10)				(7)	(553)
	(4,220)	**(1)**		**(16)**	**38**	**932**	**(3,267)**
Operating profit before equity results and finance results	**2,356**	**5**					**2,361**
Results from equity investments							
Equity in the results of investees	1,219						1,219
Realization of other comprehensive income on disposal of investments	3						3
	1,222						**1,222**
Finance results, net							
Finance income	1,155	(2)					1,153
Finance costs	(2,710)	5					(2,705)
Income from derivative financial instruments	(213)						(213)
Foreign exchange, net	(724)						(724)
	(2,492)	**3**					**(2,489)**
Profit before income tax and social contribution	**1,086**	**8**					**1,094**
Income tax and social contribution							
Current	(723)	1					(722)
Deferred	592	(6)					586
Profit for the continuing operations	**955**	**3**					**958**
Discontinued operations							
Loss for the discontinued operations	(145)	(3)					(148)
Profitfor the year attributable to the owners	**810**						**810**
Profit attributable to the owners of the Company	590						590
Profit attributable to non-controlling interests	220						220
Profit for the year	**810**						**810**
Weighted average number of shares - thousands (to the owners of the Company)	18,278,789						18,278,789
Basic and diluted earnings per thousand shares, in reais	**32.28**						**32.28**
From continuing operations							
Basic and diluted earnings per thousand shares, in reais	**40.21**	**0.17**					**40.38**
From discontinued operations							
Basic and diluted loss per thousand shares, in reais	**(7.93)**	**(0.17)**					**(8.10)**

2.4 Foreign currency translation

(a) Functional and presentation currency of the financial statements

The functional currency of the Company is the Brazilian Real ("R$", "Real" or "reais”).

(b) Transactions and balances

Foreign currency transactions are translated into reais using the exchange rates prevailing at the dates of the transactions or the dates of valuation when items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of income, except when deferred in equity as net investment hedges.

(c) Subsidiaries with a different functional currency

The results and financial positions of all the Company entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

(i) Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

(ii) Income and expenses for each statement of income are translated at average exchange rates;

(iii) All resulting exchange differences are recognized as a separate component of equity, in "Carrying value adjustments".

The amounts presented in the cash flow are extracted from the translated movements of the assets, liabilities and profit or loss, as detailed above.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations, and of borrowings and other foreign currency instruments designated as hedges of such investments, are recognized in equity. When a foreign operation is partially disposed of or sold, exchange differences that were recorded in equity are recognized in the statement of income as part of the gain or loss on sale.

Goodwill and fair value arising from the acquisition of an entity abroad are treated as assets and liabilities of the entity abroad and converted at the closing rate.

Below are the functional currencies defined for the significant foreign subsidiaries:

Company	Country	Functional currency	Main activity
Acerbrag S.A.	Argentina	Argentine Peso	Steel
St. Marys	Canada	US Dollar	Holding
Acerías Paz del Río S.A.	Colombia	Colombian Peso	Steel
Votorantim Cimentos EAA Inversiones, S.L.	Espanha	Euro	Holding
Nexa Resources Cajamarquilla S.A.	Peru	US Dollar	Zinc
Nexa Resources Perú S.A.A.	Peru	US Dollar	Mining
Nexa Resources S.A.	Luxemburgo	US Dollar	Holding
Votorantim Cimentos International	Luxemburgo	Euro	Holding
Votorantim FinCO GmbH	Luxemburgo	US Dollar	Trading

All amounts in millions of reais unless otherwise stated

3 Changes in accounting policies and disclosures

3.1 Changes in standards

3.1.1 IFRS 9 / CPC 48 – "Financial Instruments"

(i) Classification and measurement

The changes in accounting policies resulting from the adoption of IFRS 9 have been applied since January 1, 2018 and have not generated effects on the measurement of financial assets and liabilities of the Company and its subsidiaries.

The following table presents the CPC 38 original measurement categories versus the new CPC 48 measurement categories for securities on January 1, 2018:

Original classification according to CPC 38	2017	New classification according to CPC 48	2017
Fair value through profit or loss		Fair value through profit or loss	
Financial investments	3,251	Financial investments	3,251
Derivative financial instruments	160	Derivative financial instruments	160
Financial instruments - firm commitment	364	Financial instruments - firm commitment	364
	3,775		3,775
Available for sale		Fair value through other comprehensive income	
Financial investments	68	Financial investments	68
	68		68
Held to maturity		Amortized cost	
Financial investments	51	Financial investments	51
	51		51

(ii) Impairment

The Company and its subsidiaries adopted the new accounting standard as of January 1, 2018 and applied the simplified approach to recognize the expected credit loss for trade accounts receivable. The methodology for calculating the provision for losses is based on a risk matrix, which is composed of historical data of losses for all aging lists and prospective data, considering the securities to be matched.

The initial impact of adoption was a loss in the amount of R$ 342 in the consolidated statements as from January 1, 2018, recognizing the amount in equity, which was substantially composed of the adoptions made by Banco Votorantim S.A., being a loss in the amount of R$ 337.

(iii) Hedge accounting

The Company and its subsidiaries analyzed the economic relationship, credit risk and the hedge ratio of the current net investment hedge operations and concluded that they will continue to qualify for hedge accounting with the adoption of IFRS 9. As this standard does not change the general principles of accounting of effective hedges, there was no impact as a result of the application of IFRS 9.

(iv) Financial liabilities

The debt renegotiations presented in Note 19 (b), whose contractual terms were the subject of debt swaps - which did not involve financial settlements and resulted in changes in the burden of these debts - and were not substantially altered, had their values remeasured to reflect the change of accounting practice, the effect of which was a reduction of R$ 69 in loans and financing as a contra entry to the gain on the financial result, as described in Note 31.

3.1.2 IFRS 15 / CP 47 – "Revenue from Contracts with Customers"

The Company and its subsidiaries adopted the new accounting standard as of January 1, 2018, resulting in changes in accounting practices linked to the performance obligation related to the freight delivery of products to customers and, consequently, changes in comparative balances.

According to the standard, the Company and its subsidiaries made the changes retrospectively in the balances originally presented on December 31, 2017, according to Note 2.3 - Restatement of comparative figures. On December 31, 2017, the amount reclassified was R$ 932.

3.2 New standards and interpretations not yet adopted

The following standards have been published and will be mandatory for accounting periods as of January 1, 2019. There was no early adoption of these standards and changes in standards by the Company and its subsidiaries.

3.2.1 IFRS 16 / CPC 06 – "Leasing"

IFRS 16 establishes principles for recognition, measurement, presentation and disclosure for lease agreements. The standard introduces for lessee a single model for accounting on the balance sheet, where they are required to recognize a lease liability reflecting future payments and the right to use the leased asset. The nature of the expense related to these leases was changed from a line operating lease expense to a depreciation expense of the right of use and interest expense for the restatement of the lease liability.

This international standard changes existing lease standards, including CPC 06 (IAS 17) - Leasing Operations and ICPC 03 (IFRIC 4, SIC 15 and SIC 27) - "Complementary Aspects of Leasing Operations".

(a) Analysis scope and assets identification

The Company and its subsidiaries analyzed all active drainage contracts on the date of the initial adoption of the standard, when leases of machinery and equipment, light and heavy vehicles, real estate and land were identified.

As permitted by the standard, the scope of the analysis was disregarded: (i) short-term leases (less than 12 months); and (ii) contracts with amounts lower than USD 5 thousand (R$ 16 thousand).

When identifying the rights of use assets within the scope of identified contracts, the following were also disregarded: (i) contracts with variable payments; (ii) contracts in which the lease asset was considered as non-identifiable; (iii) contracts in which the Company is not entitled to obtain substantially all the economic benefits arising from the use of the asset; and (iv) contracts in which the Company and its subsidiaries do not have substantial control over the definition of the use of the asset.

It should be noted that the Company and its subsidiaries analyzed, but did not identify: (i) contracts that present fixed and variable payments in the same negotiation; (ii) contracts dealing with identifiable and non-identifiable assets in the same trade; or (iii) service contracts in which assets have been identified within the scope of the standard.

(b) Leasing term

The Company and its subsidiaries analyzed for all contracts the lease term according to the combination of non-cancellable term, term covered by the option of extension, term covered by the termination option and, mainly, Management's intention as to the term of stay in each contract.

(c) Discount rate

For initial adoption purposes, the Company and its subsidiaries adopted the average cost of active debt as of December 31, 2018 for all contracts classified in accordance with IFRS 16.

For the new contracts, renewals and additions will be identified the incremental rate for each lease. The incremental rate should reflect the acquisition cost by the Company and its subsidiaries of debt with characteristics similar to those determined by the lease agreement, in terms of term, value, guarantee and economic environment.

(i) Impacts of adoption

The Company and its subsidiaries adopted IFRS 16 on January 1, 2019, in accordance with the simplified cumulative effect in which assets and liabilities are recorded at the same time in the initial period without any effect on shareholders' equity, with an impact on the amount of R$ 577 related to rights-of-use assets and liabilities under lease agreements.

3.2.2 IFRIC 23 / ICP22 – "Uncertainty over Income Tax Treatments"

This interpretation clarifies how to apply the recognition and measurement requirements of CPC 32 - "Taxes on Profit when there is uncertainty about the treatment of taxes on profit, on the recognition and measurement of their current or deferred tax assets or liabilities, based on profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates.

The interpretations submitted consider that the Company and its subsidiaries should use their judgments in determining whether the tax treatment should be treated individually or jointly, according to the method that allows a better prediction regarding the uncertainties observed.

(a) Assumption of the examination by tax authorities

The interpretation provides as a consensus that the entity considers when accounting for an uncertain tax treatment, which affects the determination of its taxable profit (tax loss), tax base, unused tax losses, unused tax credits and tax rates, the assumption of that the tax authorities will examine the amounts they are entitled to examine and that they are fully aware of all the information related to the examination. In this way, the risk of detection should not be considered when applying the interpretation and the standard.

(b) Probability of tax authorities accepting the tax treatment chosen

The entity should consider the likelihood that the tax authority will accept the uncertain tax treatment adopted. If the entity concludes that the tax authority is likely to accept the uncertain tax treatment, the amount disclosed in a financial statement should be the same as that presented in the tax information. If the entity concludes that the entity is not likely to accept the uncertain tax treatment, the amount disclosed in the financial statements should consider the best method of measurement between the most probable and expected value.

(c) Change of facts and circumstances

The interpretation defines that the entity maintains a monitoring of the facts and circumstances that may affect: (i) its understanding of the probability that the uncertain fiscal treatment adopted by the entity will be accepted by the tax authorities; and (ii) the assumptions of their estimates regarding the subject. When identifying changes, effects should be accounted for as a change in the accounting estimate, applying CPC 23 - "Accounting Policies, Change of Estimate and Error Rectification", and CPC 24 - "Subsequent Events", if applicable.

(i) Impacts of adoption

The Company and its subsidiaries periodically monitor the tax treatment adopted, as well as obtaining, where applicable, legal support in the definition of the probability that the tax authority will accept the applicability thereof. The interpretation will be adopted as from the first quarter of 2019 and its impacts are under analysis by the Company and its subsidiaries.

There are no other standards, changes in standards or interpretations that are not in force that the Company and its subsidiaries expect to have a material impact arising from their application in its financial statements.

4 Critical accounting estimates and judgments

Based on assumptions, the Company and its subsidiaries make estimates regarding the future. By definition, accounting estimates and judgments are continuously reviewed and are based on historical experience and other factors, including expectations of future events, which are considered reasonable for the circumstances. Revisions to the estimates are recognized prospectively.

The accounting estimates will rarely be the same as the actual results. Estimates and assumptions that present a significant risk and are likely to cause a material adjustment to the carrying amounts of assets and liabilities for the next fiscal year are described in the respective notes below:

(i) Fair value of financial instruments and derivatives (Note 6.1.1);
(ii) Trade receivable (Note 11);
(iii) Property, plant and equipment (Note 17);
(iv) Intangible assets (Note 18);
(v) Current and deferred income and social contribution taxes (Note 21);
(vi) Provision (Note 23);
(vii) Pension plan (Note 25).

5 Social and environmental risk management

The Company, through its subsidiaries and associates, operates in various segments and consequently, these activities are subject to several Brazilian and international environmental laws, regulations, treaties and conventions, including those that regulate the discharge of materials into the environment, which establish the removal and cleaning of the contaminated environment, or those relating to environmental protection. The violations of the environmental regulations in force expose the violator(s) to significant fines and monetary penalties, and may require technical measures or investments to ensure the compliance with the mandatory emissions levels.

The Company and its subsidiaries carry out periodic studies to identify any potentially affected areas and records, based on the best estimates of costs, the amounts expected to be disbursed for the investigation, treatment and cleaning of the potentially affected areas.

The Company and its subsidiaries believe they are in compliance with all of the applicable environmental standards in the countries in which they operate.

6 Financial risk management

6.1 Financial risk factors

The activities of the Company and its subsidiaries expose them to a variety of financial risks, namely: (a) market risk (including currency, commodity price and interest rate risk), (b) credit risk and (c) liquidity risk.

A significant portion of the products sold by the Company and its subsidiaries, such as aluminum, nickel and zinc are commodities, with prices pegged to international indexes and denominated in US Dollars. Their costs, however, are mainly denominated in reais, and therefore, there is a mismatch of currencies between revenues and costs. Additionally, the Company and its subsidiaries have debts linked to different indexes and currencies, which may have an impact on their cash flow.

In order to mitigate the various effects of each market risk factor, the Company and its subsidiaries follow a Market Risk Management Policy, approved by the Finance Committee, with the objective of establishing governance and the overall guidelines of the process of managing these risks, as well as the metrics for their measurement and monitoring.

All amounts in millions of reais unless otherwise stated

The financial risk management process aims to protect the cash flow and its operational (revenues and costs) and financial (financial assets and liabilities) components against adverse market events, such as fluctuations in the prices of currencies, interest rates and commodity prices, and against adverse credit events. In addition, it aims to preserve liquidity.

The following financial instruments may be taken out in order to mitigate and manage risk: conventional swaps, call options, put options, collars, currency futures contracts and Non-Deliverable Forward contracts. Strategies that include simultaneous purchases and sales of options are authorized only when they do not result in a net short position in volatility of the underlying asset. The Company and its subsidiaries do not carry out transactions involving financial instruments for speculative purposes.

(a) Market risk

(i) Foreign exchange risk

The Company and its subsidiaries have certain investments in foreign operations, the net assets of which are exposed to foreign exchange risk. Foreign exchange exposure arising from the Company's and its subsidiaries' participation in foreign operations is mainly hedged by borrowings in the same currency of these investments, being classified as net investment hedges.

Presented below are the accounting balances of assets and liabilities indexed to the foreign currency at the closing date of the balance sheets:

	Note	2018	2017
Assets denominated in foreign currency			
Cash and cash equivalents	9	6,316	6,279
Financial investments	10	62	109
Trade receivables		1,329	1,192
Derivative financial instruments		472	189
Related parties		54	56
Dividends			11
		8,233	**7,836**
Liabilities denominated in foreign currency			
Borrowing (*)		20,668	17,817
Derivative financial instruments		244	382
Trade payables		2,517	1,955
Confirming payables	20	838	761
Deferred revenue - silver streaming		774	734
		25,041	**21,649**
Net exposure		**(16,808)**	**(13,813)**

(*) Does not consider borrowing costs.

(ii) Cash flow and fair value interest rate risk

The interest rate risk arises from the fluctuations of each of the main indexes of interest rates from borrowing and from financial investments, which have an impact on the payments and receipts of the Company and its subsidiaries. Borrowing at fixed rates exposes the Company and its subsidiaries to fair value interest rate risk.

(iii) Commodity price risk

The Financial Policy of the Company's operating subsidiaries establishes guidelines to mitigate the risk of fluctuations in commodity prices that have an impact on the cash flow of the Company's operating subsidiaries.

The exposure to each commodity price considers the monthly projections of production, purchases of inputs and flows of maturities of the related hedges. Hedge transactions are classified into the following categories:

Fixed-price commercial transactions - hedge transactions that switch, from fixed to floating, the price contracted in commercial transactions with customers interested in purchasing products at a fixed price;

Hedges for "quotation periods" - hedges that set a price for the different "quotation periods" between the purchases of certain inputs (metal concentrate) and the sale of products arising from the processing of these inputs;

Hedges for "costs of inputs" - intended to ensure protection against volatility in the prices/costs of its operating subsidiaries for commodities such as oil and natural gas;

Hedges for "operating margin" - intended to set the operating margin for a portion of the production of certain operating subsidiaries.

(b) Credit risk

Derivative financial instruments and financial investments create exposure to credit risk of counterparties and issuers. The Company and its subsidiaries adopt the policy of working with issuers which have, at a minimum, been assessed by two of the following three rating agencies: Fitch Ratings, Moody's or Standard & Poor's ("S&P"). The minimum rating required for the counterparties is "A" (Brazilian scale) or "BBB-" (international scale), or equivalent. For financial assets where issuers do not meet the minimum credit risk ratings, criteria proposed by the Finance Committee are applied as an alternative.

The credit quality of financial assets is disclosed in Note 8. The ratings disclosed in this Note always represent the most conservative ratings of the agencies in question.

The pre-settlement risk methodology is used to assess counterparty risk on derivatives transactions, determining (via Monte Carlo simulations) the likelihood of a counterparty not honoring the financial commitments defined by the contract. The use of this methodology is described in the Votorantim Financial Policy.

(c) Liquidity risk

The following table analyzes the financial liabilities of the Company and its subsidiaries, by maturity, corresponding to the period remaining in the balance sheet up to the contractual maturity date. Derivative financial liabilities are included in the analysis when their contractual maturities are essential for an understanding of the temporary cash flows. The amounts disclosed in the table are the undiscounted contractual cash flows, these amounts may not be reconciled with the amounts disclosed in the balance sheet.

All amounts in millions of reais unless otherwise stated

	Note	Up to one year	From one to three years	From three to five years	From five to ten years	From ten years	Total
At December 31, 2018							
Borrowing (*)		6,176	5,625	7,243	9,335	4,420	32,799
Derivative financial instruments		144	69	30			243
Confirming payables	20	1,187					1,187
Trade payables		4,262					4,262
Dividends payable	14	482					482
Related parties		12	124				136
Use of public assets		80	123	367	357	778	1,705
		12,343	**5,941**	**7,640**	**9,692**	**5,198**	**40,814**
At December 31, 2017							
Borrowing (*)		3,603	5,531	6,970	12,941	7,931	36,976
Derivative financial instruments		310	63	9			382
Confirming payables	20	909					909
Trade payables		3,514					3,514
Dividends payable	14	188					188
Related parties		19	6				25
Use of public assets		79	170	192	591	1,637	2,669
		8,622	**5,770**	**7,171**	**13,532**	**9,568**	**44,663**

(*) Does not include the recorded fair value of the debts contracted under Resolution 4131/1962.

6.1.1 Derivatives contracted

Accounting policy

Initially, derivatives are recognized at fair value on the date of their contracting and are subsequently re-measured at their fair value. The method for recognizing the resulting gain or loss depends on whether or not the derivative is designated as a hedge instrument in cases of adoption of hedge accounting. If this is the case, the method depends on the nature of the item being hedged. The Company and its subsidiaries adopt hedge accounting and designates certain derivatives such as:

(i) Cash flow hedge

With a view to ensuring a fixed operating margin in reais for a portion of the production of the metal businesses, the subsidiaries enter into commodity forward contracts (zinc, aluminum and nickel) on sales of certain commodities combined with the sale of US Dollar forward contracts. These subsidiaries adopt hedge accounting for the derivative instruments entered into for this purpose.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in equity within "Carrying value adjustments". The gain or loss relating to the ineffective portion is recognized as “Operating income (expenses)”. The amounts recognized in equity are recorded in the statement of income (in the same line item affected by the transaction originally hedged) upon realization of the hedged exports and/or sales referenced to London Metal Exchange ("LME") prices.

(ii) Fair value hedges

With the objective of maintaining the flow of the metal businesses' operating revenue pegged to LME prices, the subsidiaries enter into hedging transactions under which they convert sales at fixed prices to floating prices in commercial transactions with customers interested in purchasing products at a fixed price. Changes in the fair values of derivatives that are designated and qualify as fair value hedges are recorded in "Operating income (expenses)".

(iii) Fair value of derivatives and other financial instruments

The fair value of financial instruments that are not traded in active markets is determined through the use of valuation techniques. The Company and its subsidiaries use their judgment to choose among several methods and to establish assumptions that are based primarily on the market conditions existing at the balance sheet date.

All amounts in millions of reais unless otherwise stated

(a) Effects of the derivative financial instruments on the balance sheet and cash flow

The table below summarizes the derivative financial instruments and the underlying hedged items:

Details of the main derivative operations

	Principal Value							Fair value		Realized gain (loss)	Fair value by maturity				
Programs	**2018**	**2017**	**As per unit**	**Purchase/ sale**	**Average FWD rate**		**Average term (days) of maturity**	**2018**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Hedge Capex															
Collars	1,057		ton	P	3.6	BRL/USD	412	(6.2)			0.4	(5.5)	(1.0)		
								(6.2)			**0.4**	**(5.5)**	**(1.0)**		
Sales at a fixed price															
Zinc forward	10,566	2,318	ton	P	2,559	USD/ton	129	(3.3)	2.1	(6.9)	(3.2)	(0.2)			
								(3.3)	**2.1**	**(6.9)**	**(3.2)**	**(0.2)**			
Hedging instruments for mismatches of quotation quarter															
Zinc forward	153,422	281,397	ton	P/S			21	2.8	(16.3)	(4.5)	2.8				
Silver forward		238	k oz (*)	P/S					0.6	0.2					
Aluminum forward	1,000	6,850	ton	P/S			1	0.1	(0.2)	4.6	0.1				
								2.9	**(15.9)**	**0.3**	**2.9**				
Hedging instruments for the operating margin of metals															
Aluminum forward	13,750	18,970	ton	S	2,092	USD/ton	1	8.5	(21.9)		8.5				
USD forward	29	33	USD	S	3.39	BRL/USD	1	(14.1)	8.9		(14.1)				
								(5.6)	**(13.0)**		**(5.6)**				
Hedging instruments for foreign exchange exposure															
USD forward	514	451	USD	P	4		16	(7.6)	(21.2)	8.0	(7.6)				
Turkish lira forward	11	26	USD	P	6.10	TRY/USD	22	(4.3)	0.4	0.1	(4.3)				
								(11.9)	**(20.8)**	**8.1**	**(11.9)**				
Hedging instruments for debts															
TJLP floating rate vs. CDI floating rate swaps		28	BRL						1.0	1.3					
LIBOR floating rate vs. CDI floating rate swaps	373	254	USD		107.47%	% CDI	811	141.6	42.4	25.4	43.1	(22.0)	29.6	(13.7)	104.6
USD fixed rate vs. CDI floating rate swaps		50	USD						(42.7)	(49.1)					
LIBOR floating rate vs. COP fixed rate swaps			USD			Pré COP				3.3					
								141.6	**0.7**	**(19.1)**	**43.1**	**(22.0)**	**29.6**	**(13.7)**	**104.6**
								117.5	**(46.9)**	**(17.6)**	**25.7**	**(27.7)**	**28.6**	**(13.7)**	**104.6**

(*) k oz– Troy Ounce

All amounts in millions of reais unless otherwise stated

Details of the main derivative operations

	Principal Value							Fair value		Realized gain (loss)	Fair value by maturity				
Programs	2018	2017	As per unit	Purchase/ sale	Average FWD rate		Average term (days) of maturity	2018	2017	2018	2019	2020	2021	2022	2023
Hedge accounting - cash flow hedge															
Hedging instruments for the operating margin of metals															
Aluminum forward	114,000	165,175	ton	S	2,198	USD/ton	144	148.9	(143.2)	(81.6)	148.9				
USD forward	251	334	USD	S	3.78	BRL/USD	143	(32.8)	0.1	(72.1)	(32.8)				
								116.1	**(143.1)**	**(153.7)**	**116.1**				
Hedging instruments for mismatches of quotation quarter															
Zinc forward	36,212	58,800	ton	P/S			49	(10.7)	9.9	(0.7)	(10.7)				
Silver forward		265	k oz (*)	P/S					(0.2)	1.0					
								(10.7)	**9.7**	**0.3**	**(10.7)**				
Hedge accounting - fair value hedge															
Sales at a fixed price															
Zinc forward		202	ton	P		USD/ton			0.1						
									0.1						
Hedging instruments for mismatches of quotation quarter															
Zinc forward	71,386	93,003	ton	P/S			44	5.6	(11.4)	68.5	5.6				
								5.6	**(11.4)**	**68.5**	**5.6**				
								111.0	**(144.7)**	**(84.9)**	**111.0**				
								228.5	**(191.6)**	**(102.5)**	**136.7**	**(27.7)**	**28.6**	**(13.7)**	**104.6**

(*) k oz– Troy Ounce

The transactions involving derivative financial instruments recognized in “Carrying value adjustments” amounted to R$ 204 in 2018. Besides this, there are hedge accounting operations, which amounted to a loss of R$ (46) in the subsidiaries not consolidated, recognized in “Carrying value adjustments”.

All amounts in millions of reais unless otherwise stated

(b) Derivative financial instruments – Put-option

In the year ended December 31, 2018, the operation in which VS became a subsidiary of AMB was finalized. According to the agreement between the parties, VSA became a minority stakeholder of 15% of AMB's combined long steel business, which, in compliance with accounting rules, was recognized as a financial instrument in accordance with CPC 48 - "Financial instruments".

(c) Effects of financial derivative instruments on the financial results

The chart below shows the impact of the financial derivative instruments in the financial results of the year:

Programs	Fair value	Gain (loss) realized	Total
Hedge Capex			
Collars	(6.2)		(6.2)
	(6.2)		**(6.2)**
Hedging instruments for foreign exchange exposure			
USD forward	13.6	8.0	21.6
Turkish lira forward	(4.7)	0.1	(4.6)
	8.9	**8.1**	**17.0**
Hedging instruments for debts			
TJLP floating rate vs. CDI floating rate swaps	(1.0)	1.3	0.3
LIBOR floating rate vs. CDI floating rate swaps	99.2	25.4	124.6
USD fixed rate vs. CDI floating rate swaps	42.7	(49.1)	(6.4)
LIBOR floating rate vs. COP fixed rate swaps		3.3	3.3
	140.9	**(19.1)**	**121.8**
Intrumentos financeiros			
Put option	71.0		71.0
	71.0		**71.0**
Effect on the finance results	**214.6**	**(11.0)**	**203.6**

6.1.2 Fair value estimation

The main financial assets and liabilities are described below, as well as their valuation assumptions:

Financial assets - considering the nature and the terms, the amounts recorded approximate their realizable values.

Financial liabilities - these instruments are subject to the usual market interest rates. The market value was based on the present value of the expected future cash disbursements, at interest rates currently available for the issue of debts with similar maturities and terms.

The Company discloses fair value measurements according to their level of the following fair value measurement hierarchy:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets and liabilities.

Level 2 – Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).

Level 3 – Inputs for the assets or liabilities that are not based on observable market data (that is, unobservable inputs).

As at December 31, 2018, the financial assets and liabilities carried at fair value were classified as levels 1 and 2 in the fair value measurement hierarchy.

All amounts in millions of reais unless otherwise stated

		Fair value measured based on		2018
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	4,204	3,463	7,667
Financial investments	10	1,869	1,544	3,413
Derivative financial instruments	6.1.1		472	472
Financial instruments - firm commitment	15		202	202
		6,073	**5,681**	**11,754**
Liabilities				
Borrowing	19	16,413	8,072	24,485
Derivative financial instruments	6.1.1		244	244
Confirming payables	20		1,187	1,187
Financial instruments - firm commitment	15		180	180
Deferred revenue - silver streaming			774	774
		16,413	**10,457**	**26,870**

		Fair value measured based on		2017
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	5,715	3,245	9,177
Financial investments	10	1,573	2,014	3,370
Derivative financial instruments	6.1.1		190	190
Financial instruments - firm commitment	15		364	364
		7,288	**5,813**	**13,101**
Liabilities				
Borrowing	19	15,292	10,217	25,509
Derivative financial instruments	6.1.1		382	382
Confirming payables	20		909	909
Financial instruments - firm commitment	15		208	208
Deferred revenue - silver streaming			734	734
		15,292	**12,450**	**27,742**

6.1.3 Hedge of net investments in foreign operations

Accounting policy

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognized in "Carrying value adjustments". The gain or loss relating to the ineffective portion is recognized immediately in income. Gains and losses accumulated in equity are included in the statement of income when the foreign operation is partially or fully disposed of or sold.

Were designated as hedged investments presented in the following table including the portion of the debt of the Company and its subsidiaries Companhia Brasileira de Aluminio ("CBA"), Nexa BR and VCSA, denominated in Euros and US Dollars.

All amounts in millions of reais unless otherwise stated

	2018		09/07/1905	
	Investment	Debt	Investment	Debt
Nexa Resources Cajamarquilla S.A.	3,437	5,247	2,825	2,981
Votorantim Cement North America Inc. ("VCNA") (i)			2,170	4,219
Votorantim Cimentos EAA Inversiones, S.L. ("VCEAA")	1,092	2,490	1,723	2,263

The foreign exchange loss on the conversion of debts, net of income tax and social contribution, recognized as equity valuation adjustments on December 31, 2018, was R$ 932 (December 31, 2017, loss of R$ 163) (Note 26 (c)).

(i) In 2018, the subsidiary VCSA designated its US Dollar debt, except for the loans of Law 4131/1962, in the amount of R$ 4,491 (USD 1,158)(December 31, 2017, R$ 4,219 (USD 1,275)) as an investment hedging instrument in its indirect subsidiary St. Mary's. The hedge transaction was discontinued in November 2018, as a consequence of the corporate reorganization, when the Company ceased to be the direct controlling shareholder of the investment in VCEAA (Note 1.1 (j)).

The Company and its subsidiaries document and evaluate the effectiveness of the investment hedge operations on a monthly basis, as required by IFRS 9 - "Financial Instruments: Recognition and Measurement".

6.1.4 Sensitivity analysis

The main risk factors affecting the pricing of cash and cash equivalents, financial investments, loans and financing and derivative financial instruments are exposure to the fluctuation of the US Dollar, Euro, Turkish lira, New Peruvian Sun, Argentine Peso and Bolivian interest rates, LIBOR, CDI, US Dollar coupon, commodity prices and electricity purchase and sale contracts. The scenarios for these factors are prepared using market sources and specialized sources, following the Company's governance.

The scenarios as at December 31, 2018 are described below:

Scenario I - Considers a shock in the market curves and quotations at December 31, 2018, according to the base scenario defined by management for March 31, 2019;

Scenario II - considers a shock of + or - 25% in the market curves at December 31, 2018;

Scenario III - considers a shock of + or - 50% in the market curves at December 31, 2018.

All amounts in millions of reais unless otherwise stated

						Impacts on profit (loss)					Impacts on comprehensive income				
						Scenario I	Scenarios II & III				Scenario I	Scenarios II & III			
Risk factors	Cash and cash equivalents and financial investments (i)	Borrowing and related parties (i)	Derivative financial instruments/As per unit		Changes from 2018	Results of scenario I	-25%	-50%	+25%	+50%	Results of scenario I	-25%	-50%	+25%	+50%
Foreign exchange rates															
USD	4,724	17,031 (*)	1,470	USD	-0.6%	(7)	(195)	(312)	260	454	72	2,798	5,597	(2,798)	(5,597)
EUR	729	2,977			0.6%	3	(126)	(251)	126	251	(17)	688	1,375	(688)	(1,375)
PEN	173				1.0%	2	(42)	(85)	42	85		(1)	(2)	1	2
BOB	46	469			-2.0%						8	106	212	(106)	(212)
TRY	62	187			-19.9%	(12)	(15)	(31)	15	31	37	47	93	(47)	(93)
ARS	95				-15.0%						(14)	(24)	(47)	24	47
	5,829	20,664	1,470			(14)	(378)	(679)	443	821	86	3,614	7,228	(3,614)	(7,228)
Interest rates															
BRL - CDI	4,678	2,829	5,573	BRL	16 bps	2	(17)	(34)	18	37		5	10	(5)	(10)
USD - LIBOR		1,577	1,295	USD	-6 bps		(12)	(24)	12	24		2	5	(2)	(5)
US Dollar coupon			1,459	USD	26 bps	9	33	69	(31)	(61)	(1)	(3)	(6)	3	6
	4,678	4,406	8,327			11	4	11	(1)	1	(1)	4	9	(4)	(8)
Price of commodities															
Zinc			271,586	ton	1.6%	(7)	118	236	(118)	(236)	2	(29)	(57)	29	57
Aluminum			128,750	ton	14.8%						(120)	203	406	(203)	(406)
			400,336			(7)	118	236	(118)	(236)	(118)	174	348	(174)	(348)
Firm commitment - electric energy															
Sale and purchase agreements - fair value			22	BRL			(2)	(5)	2	4					
			22				(2)	(5)	2	4					

(*) Considers baskets of currencies

(i) The balances presented do not reconcile with the cash and cash equivalents, financial investments, related parties and borrowing notes, as the analysis only covers the most significant currencies and the interest rates cover only the principal value.

7 Financial instruments by category

Accounting policy

The Company and its subsidiaries classify their financial instruments depending on the purpose for which the financial instruments were acquired. Management determines the classification of financial instruments upon initial recognition, in the following categories:

(a) Financial instruments at fair value through profit or loss

These are financial assets held for active and frequent trading. These assets are measured at their fair value, and the changes are recognized in the statement of income for the year.

(b) Financial instruments at fair value through other comprehensive income

Financial instruments that meet the criterion of contractual terms, which give rise to cash flows that are exclusively the payment of principal and interest and are maintained in a business model, the objective of which is achieved both by obtaining contractual cash flows and by sale of financial assets. The instruments in this classification are measured at fair value through other comprehensive income.

(c) Financial instruments at amortized cost

Financial instruments maintained in a business model whose purpose is to obtain contractual cash flows and their contractual terms give rise to cash flows that are exclusively the payment of principal and interest. The instruments in this classification are measured at amortized cost.

(d) Impairment of financial assets measured at cost

This is measured as the difference between the book value of the assets and the present value of the estimated future cash flows (excluding future credit losses that were not incurred), discounted at the current interest rate of financial assets. The book value of the asset is reduced and the amount of the loss is recognized in the statement of income.

If, in a subsequent period, the impairment loss decreases and the impairment can be objectively related to an event occurring after recognition of the impairment (such as an improvement in the debtor's credit rating), the reversal of the loss will be recognized in the statement of the results.

All amounts in millions of reais unless otherwise stated

	Note	2018	2017
Assets			
At amortized cost			
Financial investments	10		51
Trade receivables	11	2,546	2,421
Related parties	14	271	143
		2,817	2,615
Fair value through profit or loss			
Cash and cash equivalents	9	7,667	9,177
Financial investments	10	3,396	3,251
Derivative financial instruments	6.1.1	287	160
Financial instruments - firm commitment		202	364
		11,552	12,952
Fair value through other comprehensive income			
Financial investments	10	17	68
Derivative financial instruments	6.1.1	185	30
		202	98
Liabilities			
At amortized cost			
Borrowing	19	11,592	12,859
Trade payables		4,262	3,514
Related parties	14	136	25
Confirming payables	20	1,187	909
Use of public assets	24	1,189	1,132
		18,366	18,439
Fair value through profit or loss			
Borrowing	19	12,859	11,771
Derivative financial instruments	6.1.1	170	199
Financial instruments - firm commitment		180	208
		13,209	11,970
Fair value through other comprehensive income			
Derivative financial instruments	6.1.1	74	183
		74	183

All amounts in millions of reais unless otherwise stated

8 Credit quality of financial assets

			2018			2017
	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents						
AAA	1,329	39	1,368			
AA+	4		4	376		376
AA	6	796	802	70		70
AA-		424	424	2,452	464	2,916
A+		543	543		2,392	2,392
A	1	1,783	1,784		885	885
A-		286	286		393	393
BBB+		759	759		411	411
BBB		118	118		458	458
BBB-		369	369		58	58
BB		21	21		140	140
B-		64	64		77	77
B+		55	55		21	21
B		27	27			
Unrated (i)	11	1,032	1,043		980	980
	1,351	**6,316**	**7,667**	**2,898**	**6,279**	**9,177**
Financial investments						
AAA	3,099		3,099			
AA+	51		51	867		867
AA	166		166	30		30
AA-	5		5	2,315	14	2,329
A+	19	29	48	3	9	12
A		2	2		25	25
A-				18	2	20
BBB+					1	1
B-		30	30		50	50
Unrated (ii)	11	1	12	28	8	36
	3,351	**62**	**3,413**	**3,261**	**109**	**3,370**
Derivative financial instruments						
AAA	242		242	30		30
AA+				7		7
AA	1	52	53			
AA-	5		5	69	17	86
A+		134	134		11	11
A		1	1		1	1
Unrated (i)	37		37	55		55
	285	**187**	**472**	**161**	**29**	**190**
	4,987	**6,565**	**11,552**	**6,320**	**6,417**	**12,737**

The local and global ratings were obtained from the ratings agencies (S&P, Moody's and Fitch Ratings). The Company considered the ratings of S&P and Fitch Ratings for presentation purposes and the classification as established in Financial Policies. The main variations between the ratings are due to the changes in methodology performed by S & P on the Brazilian national scale in 2018.

(i) Refers to values invested in offshore banks, which are not rated by any rating agency.
(ii) Refers to Grupo Votorantim's exclusive investment funds (Credit Receivables Investment Funds – "FIDCs"), which are not rated by any rating agency.

All amounts in millions of reais unless otherwise stated

9 Cash and cash equivalents

Accounting policy

Cash and cash equivalents include cash, bank deposits and other highly liquid short-term investments whose original maturities are less than three months, which are readily convertible into a known amount of cash and which are subject to an insignificant risk of change in value.

(a) Breakdown

Cash and cash equivalents in local currency include deposits in current bank accounts and government securities (overnight operations) or financial institutions, indexed to the interbank deposit rate. Cash equivalents in foreign currency are mainly composed of financial instruments in local currency.

	2018	2017
Local currency		
Cash and banks	28	14
Bank Deposit Certificates - "CDBs"	3	534
Repurchase agreements - private securities		165
Repurchase agreements - public securities	1,320	2,185
	1,351	**2,898**
Foreign currency		
Cash and banks	2,856	3,516
Bank Deposit Certificates - "CDBs"	2,759	1,503
Time deposits	701	1,260
	6,316	**6,279**
	7,667	**9,177**

10 Financial investments

Accounting policy

Financial investments are held for the purpose of servicing investments whose maturities are long-term from the date of acquisition.

(a) Breakdown

Most financial investments have immediate liquidity, however, they are classified as financial investments based on the original maturities, considering the intended allocation of funds. The investments in national currency comprise government securities or financial institutions indexed to the interbank deposit rate. Foreign currency-denominated investments consist mainly of fixed-income financial instruments in local currency (time deposits).

All amounts in millions of reais unless otherwise stated

	2018	2017
Fair value through profit or loss		
Bank Deposit Certificates - "CDBs"	1,396	543
Financial Treasury Bills - "LFTs"	1,763	961
Repurchase agreements - public securities	106	605
Repurchase agreements - private securities	54	1,048
Investment fund quotas	15	29
Financial investments in foreign currency	62	65
	3,396	**3,251**
Fair value through other comprehensive income		
Bank Deposit Certificates - "CDBs"	17	68
	17	**68**
Amortized cost		
Financial Treasury Bills - "LFTs"		7
Financial investments in foreign currency		44
		51
	3,413	**3,370**
Current	3,390	3,345
Non-current	23	25
	3,413	**3,370**

11 Trade receivables

Accounting policy

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of the Company's business.

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest rate method, less provision for impairment of trade receivables. Receivables from customers abroad are presented based on the exchange rates prevailing at the balance sheet date.

(a) Breakdown

	Note	2018	2017
Trade receivables - Brazil		1,308	1,296
Trade receivables - foreign customers		1,398	1,231
Related parties	14	14	53
		2,720	**2,580**
Allowance for doubtful accounts		(174)	(159)
		(174)	**(159)**
		2,546	**2,421**

All amounts in millions of reais unless otherwise stated

(b) Breakdown by currency

	2018	2017
Brazilian real	1,217	1,229
U.S. dollar	741	620
Euro	102	115
Colombian peso	120	111
Turkish lira	88	91
Uruguayan peso	82	43
Moroccan dirham	62	56
Argentine peso	61	74
Other	73	82
	2,546	**2,421**

(c) Changes in estimated loss for doubtful accounts

	2018	2017
Opening balance	(159)	(159)
Additions, net	(21)	(17)
Receivables written off as uncollectible (i)	13	13
Reclassification of assets classified as held-for-sale	1	4
Effect of subsidiaries excluded from consolidation	(7)	
Foreign exchange variations	(1)	
Closing balance	**(174)**	**(159)**

(i) The amounts charged to the estimated loss account with bad debt are generally written off when there is no expectation of recovering the funds.

(d) Aging of trade receivables

	2018	2017
Current	2,184	1,975
Up to three months past due	295	326
Three to six months past due	22	32
Over six months past due	219	247
	2,720	**2,580**

All amounts in millions of reais unless otherwise stated

12 Inventory

Accounting policy

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the weighted average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads. Raw materials derived from biological assets are measured at fair value, less estimated point-of-sale costs at the point of harvest, when they are transferred to inventories in non-current assets.

Net realizable value is the estimated selling price in the ordinary course of business, less conclusion costs and selling expenses. Imports in transit are stated at the accumulated cost of each import.

The subsidiaries, at least once a year, carries out a physical inventory. Inventory adjustments are recorded under "Cost of goods sold and services rendered".

The provision for inventory losses refers substantially to obsolete and low turnover materials.

	2018	2017
Finished products	845	749
Semi-finished products	1,499	1,482
Raw materials	832	624
Auxiliary materials and consumables	896	856
Imports in transit	142	205
Other	82	84
Provision for inventory losses	(482)	(474)
	3,814	**3,526**

13 Taxes recoverable

Accounting policy

The recoverable taxes are held in assets mainly for the purpose of recognizing in the balance sheet of the entity the book values that will be object of future recovery.

	2018	2017
Corporate Income Tax ("IRPJ") and Social Contribution on Net Income ("CSLL")	1,751	1,524
Social Contribution on Revenue ("COFINS") (i)	1,057	379
State Value-added Tax on Sales and Services ("ICMS")	594	465
Value-added Tax ("VAT") (foreign companies)	297	265
Social Integration Program ("PIS") (i)	230	85
Withholding Income Tax ("IRRF")	62	69
State VAT on Sales and Services on PP&E	59	66
"IRPJ/CSLL" - "*Plano Verão*"	30	81
Excise Tax ("IPI")	28	32
Other	96	135
	4,204	**3,101**
Current	1,473	1,317
Non-current	2,731	1,784
	4,204	**3,101**

(i) Refers substantially, to the PIS and COFINS credit recognized in the subsidiaries VCSA and Nexa BR, in the amounts of R$ 550 e R$ 231, respectively (Note 1.1 (h)).

All amounts in millions of reais unless otherwise stated

14 Related parties

Assets	Trade receivables		Dividends receivable		Non-current assets	
	2018	2017	2018	2017	2018	2017
Related companies and joint ventures						
Cementos Avellaneda S.A.	3	12				
Cementos Granadilla S.L.	1	1			3	6
Banco Votorantim S.A.			9	55		
Cementos Especiales De Las Islas, S.A.				11		
Citrosuco S.A. Agroindústria (i)	1	23			216	86
Citrosuco GmbH (i)					50	43
Fibria Celulose S.A.	3	12		76	1	1
Mineração Rio Do Norte S.A.				6		
Supermix Concreto S.A.	4	5				
VTRM Energia Participações S.A			5			
Others	2				1	7
	14	**53**	**14**	**148**	**271**	**143**
Current	14	53	14	148		
Non-current					271	143
	14	**53**	**14**	**148**	**271**	**143**

Liabilities	Trade payables		Dividends payable		Non-current liabilities	
	2018	2017	2018	2017	2018	2017
Parent company						
Hejoassu Administração S.A.			415	140		
Related companies and joint ventures						
Fibria Celulose S.A.	13	3			117	1
Superior Materials Holdings, LLC	7	1				
Others	19	4			19	24
	39	**8**	**415**	**140**	**136**	**25**
Non-controlling interests			67	48		
Current	39	8	482	188		
Non-current					136	25
	39	**8**	**482**	**188**	**136**	**25**

Profit and loss	Sales (purchases), net		Finance income (expenses), net	
	2018	2017	2018	2017
Related companies and joint ventures				
Cementos Avellaneda S.A.	36	32		
Cementos Especiales De Las Islas, S.A.	27	12		
Cementos Granadilla S.L.	20	14		
Citrosuco S.A. Agroindústria	32	28		5
Fibria Celulose S.A.	43	143		
Midway Group, LLC	27	21		
Supermix Concreto S.A.	204	167		
Superior Materials Holdings, LLC	66	58		
Others	20	12	(2)	2
	475	**487**	**(2)**	**7**

(i) Refers to accounts receivable related to assets in excess of the basic net assets invested in Citrosuco's operation. The realization period is linked to the performance of each item under contractual rules laid down in the shareholder agreement and the closing memorandum signed between Fischer S.A. – Comércio, Indústria e Agricultura and Votorantim.

All amounts in millions of reais unless otherwise stated

15 Financial instruments – firm commitment

The controlled company Votorantim Comercializadora de Energia Ltda. ("Votener") centralizes energy purchase and sale transactions to meet the demands of Votorantim companies. A portion of these transactions takes the form of contracts that have been entered into and continue to be carried out for the purpose of receiving the energy for own use or delivering the energy of self-production, in accordance with the productive demands of the Company's subsidiaries and, therefore, meet the definition of a financial instrument.

Another part of these transactions refers to purchases and sales of energy, not used in the productive process of Votorantim companies, being transacted in the active market, and therefore, it meets the definition of financial instruments, due to the fact of being liquidated in energy, and promptly convertible into cash. Such contracts are recorded as derivatives in accordance with IFRS 9 / CPC 48 and are recognized in the Company's balance sheet at fair value on the date the derivative is entered into and is revalued to fair value at the balance sheet date.

The fair value of these derivatives is estimated based, in part, on quotations of prices published in active markets, to the extent that such observable market data exist, and partly by the use of valuation techniques, which considers: (i) prices established in the purchase and sale operations; (ii) risk margin in the supply and (iii) projected market price in the period of availability. Whenever the fair value at initial recognition for these contracts differs from the transaction price, gain or loss, it is recognized in profit or loss for the year.

The Company, through its indirect subsidiary Votener, operates in the Regulated Contracting Environment ("ACR") and participated in the 13th electric power purchase auction on April 30, 2014, in which, through a firm commitment, it made sales until December 2019. These transactions, on initial recognition, resulted in gains from the sale of surplus energy to the Company, which was recognized at fair value. The net difference of expenses and revenues generated by the realization of the fair value, through the physical settlement of the sale and purchase agreements, was recognized as an expense in the amount of R$ 147 in "Other operating expenses, net" (Note 30).

In addition, the other operations carried out by the subsidiaries in the Free Contracting Environment ("ACL"), which meet the definition of a financial instrument, were likewise recognized at fair value. The realization of the fair value in the amount of R$ 15 was recognized as an expense in "Other operating expenses, net" (Note 30).

The values quoted above have the following composition:

	ACR			ACL				Total	
	CBA	Votorantim Energia	Total	Votorantim Cimentos	CBA	Votorantim Energia	Total	2018	2017
Realization	(116)	(33)	(149)		(9)	(41)	(50)	(199)	(312)
Recognition				(31)	(23)	119	65	65	(97)
Constitution (reversal)	2		2					2	(113)
	(114)	**(33)**	**(147)**	**(31)**	**(32)**	**78**	**15**	**(132)**	**(522)**

The table below shows the composition of the assets and liabilities:

	ACR			ACL				Total	
	CBA	Votorantim Energia	Total	Votorantim Cimentos	CBA	Votorantim Energia	Total	10/07/1905	2017
Assets									
Current	110	33	143		6	53	59	202	210
Non-current									154
	110	**33**	**143**		**6**	**53**	**59**	**202**	**364**
Liabilities									
Current				(19)			(19)	(19)	(1)
Non-current				(35)	(82)	(44)	(161)	(161)	(207)
				(54)	**(82)**	**(44)**	**(180)**	**(180)**	**(208)**

16 Investments

Accounting policy

Investments in affiliates, subsidiaries and joint ventures are accounted for using the equity method of accounting as of the date they become their jointly controlled joint ventures.

Affiliates are those entities in which the Company, directly or indirectly, has significant influence, but not control or joint control over financial and operating policies. In order to be classified as a jointly controlled entity, there must be a contractual agreement that allows the Company to share control of the entity and gives the Company the right to the net assets of the jointly controlled entity, not the right to its specific assets and liabilities.

The Company also recognizes its assets in accordance with the venturer's participation in the assets, liabilities, revenues and expenses of the controlled entity on a proportional basis. This implies recognizing the venturer's share of the assets, liabilities, income and expenses of the joint ventures by adding such amounts to its own assets, liabilities, revenues and expenses by the straight-line method, including such amounts in corresponding to the balance sheet and income statement of the same nature.

(i) Impairment of investments

For the calculation of the recoverable amounts of the investments, the Company and its subsidiaries use criteria similar to those used to test goodwill impairment.

All amounts in millions of reais unless otherwise stated

(a) Breakdown

Main consolidated companies	Note	Percentage of total and voting capital 2018	2017	Headquarters	Main activity
Subsidiaries					
Acerbrag S.A.		100.00	100.00	Argentina	Steel
Votorantim FinCO GmbH		100.00	100.00	Austria	Trading
Votorantim GmbH		100.00	100.00	Austria	Zinc
Acariuba Mineração e Participação Ltda.		100.00	100.00	Brazil	Holding
Companhia Brasileira de Alumínio		100.00	100.00	Brazil	Aluminum
Interávia Transportes Ltda.		100.00	100.00	Brazil	Transportation
Santa Cruz Geração de Energia S.A.		100.00	100.00	Brazil	Electric power
Silcar Empreendimentos, Comércio e Participações Ltda.		100.00	100.00	Brazil	Holding
Ventos de São Vicente Energias Renováveis S.A.	1.1 (d)		100.00	Brazil	Holding
Votener - Votorantim Comercializadora de Energia Ltda.		100.00	100.00	Brazil	Electric power
Votorantim Cimentos N/NE S.A.		100.00	100.00	Brazil	Cement
Votorantim Cimentos S.A.		100.00	100.00	Brazil	Cement
Votorantim Energia Ltda.		100.00	100.00	Brazil	Holding
Votorantim Finanças S.A.		100.00	100.00	Brazil	Finance
Votorantim Geração de Energia S.A.		100.00	100.00	Brazil	Holding
Votorantim Investimentos Latino-Americanos S.A.		100.00	100.00	Brazil	Holding
Nexa Recursos Minerais S.A.		100.00	100.00	Brazil	Zinc
Votorantim Cement North America Inc.		100.00	100.00	Canada	Holding
Acerías Paz del Río S.A.		82.42	82.42	Colombia	Steel
Votorantim Cimentos EAA Inversiones, S.L.	1.1 (j)	100.00	100.00	Spain	Holding
St. Marys Cement Inc.		100.00	100.00	USA	Cement
US Zinc Corporation	1.1 (i)		100.00	USA	Zinc
St. Helen Holding II B.V.		100.00	100.00	Cayman Islands	Holding
Hailstone Ltd.		100.00	100.00	British Virgin Islands	Holding
Nexa Resources S.A.		64.25	64.25	Luxembourg	Holding
Votorantim Cimentos International S.A.	1.1 (j)	100.00		Luxembourg	Holding
Votorantim RE		100.00	100.00	Luxembourg	Insurance
Compañia Minera Atacocha S.A.A.		91.00	91.00	Peru	Mining
Nexa Resources Perú S.A.A		80.23	80.23	Peru	Mining
Nexa Resources Cajarmarquilla S.A.		99.91	99.91	Peru	Zinc
Cementos Artigas S.A.		51.00	51.00	Uruguay	Cement
Joint operations					
Baesa - Energética Barra Grande S.A.		15.00	15.00	Brazil	Electric power
Campos Novos Energia S.A.		44.76	44.76	Brazil	Electric power
Great Lakes Slag Inc.		50.00	50.00	Canada	Cement
Voto - Votorantim Overseas Trading Operations IV Ltd.		50.00	50.00	Cayman Islands	Trading
Exclusive investment funds					
Fundo de Investimento Pentágono VC Multimercado – Crédito Privado		100.00	100.00	Brazil	Finance
Fundo de Investimento Pentágono CBA Multimercado – Crédito Privado		100.00	100.00	Brazil	Finance
Odessa Multimercado Crédito Privado		96.91	89.97	Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VC		100.00	100.00	Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VM		100.00	100.00	Brazil	Finance

All amounts in millions of reais unless otherwise stated

	Note	Percentage of total and voting capital		Headquarters	Main activity
		2018	2017		
Main non-consolidated companies					
Associates					
Cementos Avellaneda S.A.		49.00	49.00	Argentina	Cement
Alunorte - Alumina do Norte S.A.		3.03	3.03	Brazil	Mining
IMIX Empreendimentos Imobiliários Ltda.		25.00	25.00	Brazil	Mining
Mineração Rio do Norte S.A.		10.00	10.00	Brazil	Mining
Supermix Concreto S.A.		25.00	25.00	Brazil	Concrete
Cementos Especiales de las Islas S.A.		50.00	50.00	USA	Cement
Joint ventures					
Citrosuco GmbH		50.00	50.00	Austria	Agribusiness
Banco Votorantim S.A.		50.00	50.00	Brazil	Finance
Citrosuco S.A. Agroindústria		50.00	50.00	Brazil	Agribusiness
Fibria Celulose S.A.	1.1 (c)		29.42	Brazil	Wood pulp
Juntos Somos Mais Fidelização S.A.		45.00		Brazil	Services
VTRM Energia Participações S.A.	1.1 (d)	50.00	100.00	Brazil	Electric power
Hutton Transport Ltda.		25.00	25.00	Canada	Transportation
Midway Group, LLC.		50.00	50.00	USA	Cement
RMC Leasing, LLC.		50.00		USA	Equipament leasing
Superior Materials Holdings, LLC.		50.00	50.00	USA	Cement
Cementos Portland S.A.	1.1 (f)		50.00	Perú	Cement

All amounts in millions of reais unless otherwise stated

(b) Information about the companies investees

The following is a summary of selected financial information of the principal associates and joint ventures as at December 31, 2018:

	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Other comprehensive	Equity	Net revenue	Operation results	Finance income (costs)	Profit (loss) for the year	Total and voting capital (%)
Investments accounted for based on the equity method - Associates											
Cementos Avellaneda S.A.	441	826	477	20	67	770	1,378	280	46	165	49.00%
Alunorte - Alumina do Norte S.A.	8,634		2,436	2,682		3,516	4,148	(651)	(653)	(933)	3.03%
IMIX Empreendimentos Imobiliários Ltda.	7	7				14	6	6	1	5	25.00%
Mineração Rio do Norte S.A.	554	2,610	507	1,756		901	1,524	306	(282)	16	10.00%
Supermix Concreto S.A.	196	232	142	57		229	1,074	(29)	10	(19)	25.00%
Cementos Especiales de las Islas S.A.	106	84	27	8	(5)	155	252	48		25	50.00%
Controladas em conjunto *(Joint ventures)*											
Citrosuco GmbH	3,111	1,294	605	308		3,492	3,912	354	42	378	50.00%
Banco Votorantim S.A.	56,264	46,035	63,341	29,832		9,126	5,674	6,296		1,061	50.00%
Citrosuco S.A. Agroindústria	2,632	3,557	2,102	3,534		553	3,164	28	(186)	(268)	50.00%
Juntos Somos Mais Fidelização S.A.	27	3	18		0	12		(10)		(6)	45.00%
VTRM Energia Participações S.A.	26	2,897	116	16		2,791		(18)	(2)	33	50.00%
Hutton Transport Ltda.	35	61	14	2	4	80	78	(12)	1	14	25.00%
Midway Group, LLC.	28	26	9		5	45	117	13		13	50.00%
RMC Leasing LLC	5	15			1	20					50.00%
Superior Materials Holdings, LLC	94	59	39		14	114	391	48		47	50.00%

All amounts in millions of reais unless otherwise stated

(c) Changes in investees

	Opening balance for the year	Equity in the results of investees	Exchange variation	Initial adoption of IFRS 9 (iv)	Initial aplication of FIPs (iv)	Inicial adoption of IAS 29 (v)	Dividends	Additions	Reductions	Gain by adjustment to fair value in VTRM´s operation (vi)	Other	Reclassification for assets classified as held for sale	Closing balance for the year
Investments accounted for based on the equity method - Associates													
Cementos Avellaneda S.A.	251	81	(122)			168							378
Alunorte - Alumina do Norte S.A.	135	(28)											107
Mineração Rio do Norte S.A.	83	2						5					90
IMIX Empreend. Imobiliários Ltda.	6	1					(4)						3
Supermix Concreto S.A.	62	(5)											57
Cementos Especiales De Las Islas, S.A.	69	12	(4)										77
Outros	251	16									(33)		234
	857	79	(126)			168	(4)	5			(33)		946
Joint ventures													
Citrosuco GmbH (i)	2,120	156	337										2,613
Banco Votorantim S.A. (ii)	5,111	530		(337)	(116)		(97)				(33)		5,058
Citrosuco S.A. Agroindústria (i)	1,029	(171)	(28)						(178)		(42)		610
Fibria Celulose S.A. (iii)	4,116	181	7								1	(4,305)	
Juntos Somos Mais Fidelização S.A.		(3)						4			4		5
VTRM Energia Participações S.A. (i) (vi)		9					(4)	1,391		144			1,540
Hutton Transport Ltda.	18	4	1				(3)						20
Midway Group, LLC.	14	6	3										23
RMC Leasing LLC.			1					9					10
Superior Materials Holdings, LLC.	53	24	7				(19)		(8)				57
Cemento Portland S.A. (viii)	54	(1)	6						(59)				
	12,515	**735**	**334**	**(337)**	**(116)**		**(123)**	**1,404**	**(245)**	**144**	**(70)**	**(4,305)**	**9,936**
2018	**13,372**	**814**	**208**	**(337)**	**(116)**	**168**	**(127)**	**1,409**	**(245)**	**144**	**(103)**	**(4,305)**	**10,882**
2017	**12,949**	**1,219**	**2**				**(493)**		**(395)**		**90**		**13,372**

All amounts in millions of reais unless otherwise stated

(i) The following investments consider the goodwill paid on the acquisition of investments and the surplus value, which is amortized in the income statement of the parent company:

	Goodwill		Added value	
	2018	9/30/2017	2018	9/30/2017
Citrosuco S.A. Agroindústria	194	194	139	304
Citrosuco GmbH	141	145	726	649
VTRM Energia Participações S.A.			144	

(ii) The investment includes the adjustment to fair value in the amount of R$ 495 (December 30, 2017 – R$ 495).

(iii) The investment includes the addition of R$ 6 referring to the percentage of treasury shares and eliminations of unrealized profits, in the amount of R$ 178, in exchange of land with the Company. Equity was recognized up to March 31, 2018, when the investment was classified as available-for-sale.

(iv) Refers to the initial adoption of IFRS 9 and adjustments to the initial application of the new accounting criteria for the recognition of variation of FIPs quotas recognized directly in the shareholders' equity of Banco Votorantim S.A. (Note 3.1.1 (ii)).

(v) Refers to the initial adoption of IAS 29 recognized directly in shareholders' equity (Note 1.1 (e)).

(vi) Adjustment of investments by operation of VTRM (Note 1.1 (d)).

(vii) Up to May 29, 2018, VGE held a 100% interest in the VTRM investee, recognizing the equity accounting result corresponding to this holding. As of this date, it now holds a 50% interest due to the transaction (Note 1.1 (d)).

(viii) Conclusion of the sale of the CEMPOR joint venture, a transaction mentioned in Note 1.1 (f).

17 Property, plant and equipment

Accounting policy

(i) Property, plant and equipment

Property, plant and equipment are stated at their historical cost of acquisition or construction, less accumulated depreciation. Historical cost also includes finance costs related to the acquisition or construction of qualifying assets.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with these costs will flow to the Company and they can be measured reliably. The carrying amount of the replaced items or parts is derecognized.

All other repairs and maintenance are charged to the statement of income during the financial period in which they are incurred. The cost of major refurbishments is included in the carrying value of the asset when future economic benefits exceed the performance initially expected for the existing asset. Refurbishment expenses are depreciated over the remaining useful life of the related asset.

Land is not depreciated. Depreciation of other assets is calculated using the straight-line method to reduce their cost to their residual values over their estimated useful lives.

An asset's carrying amount is written down immediately to its recoverable amount when the asset's carrying amount is greater than its estimated recoverable amount, in accordance with the criteria adopted by the Company in order to determine the recoverable amount.

Gains and losses on disposals are determined by comparing the sales amount with the carrying amount and are recognized within "Other operating income (expenses), net" in the statement of income.

(ii) Impairment of non-financial assets

Assets that are subject to depreciation and amortization are reviewed for impairment whenever events or changes in economic, operating or technological circumstances may indicate impairment or loss of book value. An impairment loss is recognized when the carrying amount of the asset or cash generating unit ("CGU") exceeds its recoverable amount, adjusting the carrying amount to the recoverable amount.

The recoverable amount is the greater of an asset's fair value less costs to sell and its value-in-use. For the purpose of impairment assessment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (CGUs). Non-financial assets, except goodwill, which have been impaired, are subsequently reviewed for the analysis of a possible reversal of impairment, at the balance sheet date.

The recoverability of the assets that are used in the activities of the Company and its subsidiaries is evaluated whenever events or changes in circumstances indicate that the book value of an asset or group of assets may not be recoverable based on future cash flows. If the carrying amount of these assets exceeds their recoverable value, the net amount is adjusted and their useful life is adjusted to new levels.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and changes

										2018	2017
	Land and improvements	Buildings and construction	Machinery, equipment and facilities	Vehicles	Furniture and fittings	Construction in progress	ARO (i)	Leasehold improvements	Other	Total	Total
Opening balance for the year											
Cost	1,959	10,467	34,103	1,121	191	2,793	812	456	444	52,346	49,812
Accumulated depreciation	(58)	(4,232)	(19,722)	(918)	(145)		(443)	(251)	(354)	(26,123)	(24,352)
Net opening balance for the year	**1,901**	**6,235**	**14,381**	**203**	**46**	**2,793**	**369**	**205**	**90**	**26,223**	**25,460**
Additions	5	13	50	3	35	2,459			2	2,567	3,108
Disposals	(22)	(17)	(53)	(1)	(2)	(7)			(1)	(103)	(159)
Depreciation	(7)	(354)	(1,468)	(69)	(18)		(39)	(21)	(8)	(1,984)	(1,814)
Foreign exchange variation	72	191	481	11	3	140	31	17		946	109
Effect of subsidiaries included in (excluded from) consolidation	(1)	(164)	(1,105)	1	(4)	(1)		(2)	(10)	(1,286)	(5)
Reversal (constitution) for impairment	1	3	33		1	(10)			1	29	94
Revision of estimated cash flow							(32)			(32)	
Reclassification to assets classified as held-for-sale	(4)	(1)	(220)							(225)	(476)
Changes in the interest rate			(8)				104			96	
Exchange variation of countries with hyperinflationary economy									138	138	
Transfers (ii)	53	360	1,911	77	8	(2,589)		24	(33)	(189)	(94)
Closing balance for the year	**1,998**	**6,266**	**14,002**	**225**	**69**	**2,785**	**433**	**223**	**179**	**26,180**	**26,223**
Cost	2,060	10,890	35,343	1,225	241	2,785	917	519	389	54,369	52,346
Accumulated depreciation	(62)	(4,624)	(21,341)	(1,000)	(172)		(484)	(296)	(348)	(28,327)	(26,123)
Exchange variation of countries with hyperinflationary economy									138	138	
Net closing balance for the year	**1,998**	**6,266**	**14,002**	**225**	**69**	**2,785**	**433**	**223**	**179**	**26,180**	**26,223**
Average annual depreciation rates - %	**1**	**3**	**10**	**17**	**10**		**5**	**9**	**14**		

(i) Asset Retirement Obligation

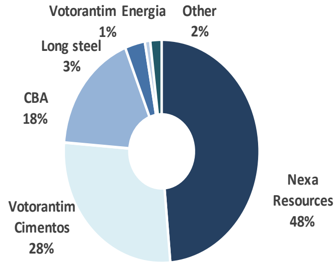
(ii) The transfers are related to the reclassification from "Construction in progress" within "Property, plant and equipment" to "Software" and "Rights to use natural resources", within "Intangible assets".

All amounts in millions of reais unless otherwise stated

(b) Construction in progress

The balance is composed mainly of expansion and optimization projects related to industry.

Segment	2018	2017
Nexa Resources	1,353	779
Votorantim Cimentos	771	1,360
CBA	492	368
Long steel	92	195
Votorantim Energia	25	20
Other	52	71
	2,785	2,793



The main projects in progress by business segment are as follows:

Nexa Resources	2018	2017
Sustaining	354	261
Expansion and modernization projects	683	212
Security, Health and enviroment projects	223	244
Information technology	53	24
Other	40	38
	1,353	779

Votorantim Cimentos	2018	2017
Sustaining	220	209
Modernization	161	66
Environment and security	67	86
Cement grinding - Pecém - Brazil	39	39
New lines of co-processing	35	67
New production line in Sobral - CE	34	
Factory in Nobres - MT	17	
Hardware and software	15	28
Geology and mining rights	10	37
Cement production capacity expansion - North America	3	462
Other	170	366
	771	1,360

All amounts in millions of reais unless otherwise stated

CBA	**2018**	**2017**
Furnace refurbishment	131	75
Rondon Bauxite projects	114	111
Revitalization and adequacy of power plant	48	51
Alumina factory project	30	25
Automation system modernization	29	32
Plastic transformation and foundry projects	29	26
Furnace rooms project	22	18
Other	89	30
	492	**368**

Long steel	**2018**	**2017**
Revitalization and adaptation of plant - Argentina and Colombia		168
Sustaining	80	
Security projects, health and environment projects - Colombia	7	8
Expansion	3	
Information technology	1	
Other	1	19
	92	**195**

Energy	**2018**	**2017**
Corumbá project	19	16
Information technology	4	
Change of corporate center - SP	2	4
	25	**20**

18 Intangible assets

Accounting policy

(i) Goodwill

Goodwill represents the excess of the cost of an acquisition over the net fair value of assets and liabilities of the acquired entity. Goodwill on acquisitions of subsidiaries is recorded as "assets" in the consolidated financial statements. Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to CGUs for the purpose of impairment testing. The allocation is made to those CGUs or groups of CGUs that are expected to benefit from the business combination in which the goodwill arose.

(ii) Rights over natural resources

Costs for the acquisition of rights to explore and develop mineral properties and to explore wind resources are capitalized and amortized using the straight-line method over their useful lives, or, when applicable, based on the depletion of the mines in question.

Once the mine or wind farm starts operating, these costs are amortized and considered a cost of production.

Depletion of mineral resources and wind farms is calculated based on extraction and utilization, respectively, taking into consideration their estimated productive lives.

(iii) Computer software

Computer software licenses and development costs directly attributable to software are recorded as intangible assets. These costs are amortized over the estimated useful life of the software (three to five years).

(iv) Use of public assets

This represents the amounts established in the concession contracts regarding the rights to hydroelectric power generation (onerous concession) under Use of Public Assets agreements.

These transactions are accounted for at the time when the operating permit is awarded, regardless of the disbursement schedule established in the contract. Upon inception, this liability (obligation) and intangible asset (concession right) correspond to the total amount of the future obligations discounted to their present value.

The amortization of the intangible asset is calculated on a straight-line basis over the period of the authorization to use the public asset. The financial liability is updated by the effective interest method and reduced by the payments contracted.

(v) Contractual customer relationships and non-competition agreements

Contractual customer relationships and non-competition agreements acquired in a business combination are recognized at fair value at the acquisition date. The contractual customer relations and non-competition agreements have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method over the estimated useful lives as follows:

Customer relationships	15 years
Non-competition agreements	5 years

(vi) Impairment of goodwill and investments

Annually, the Company and its subsidiaries review the net book value of goodwill, in order to assess whether there was deterioration or impairment. The recoverable amounts of CGUs were determined according to the value in use, based on the discounted cash flow model. The recoverable amount is sensitive to the rate used in the discounted cash flow model, as well as the expected future cash receipts and the growth rate used for extrapolation purposes.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and changes

										2018	2017
	Note	Rights over natural resources	Goodwill	ARO (i)	Use of public assets	Contracts, customer relationships and agreements	Software	Rights over trademarks and patents	Other	Total	Total
Opening balance for the year											
Cost		8,693	4,863	317	541	235	593	485	783	16,510	17,225
Accumulated amortization		(2,851)		(115)	(180)	(156)	(477)	(313)	(343)	(4,435)	(4,580)
Net opening balance for the year		**5,842**	**4,863**	**202**	**361**	**79**	**116**	**172**	**440**	**12,075**	**12,645**
Additions		1	92	12			5		5	115	174
Disposals		(32)								(32)	(243)
Amortization and depletion		(391)		(3)	(19)	(15)	(45)	(6)	(7)	(486)	(544)
Foreign exchange variation		814	667	39		(1)	(19)	3	82	1,585	266
Reclassification from assets classified as held-for-sale		(4)		(6)		6	(1)			(5)	(355)
Effect of subsidiaries excluded from consolidation	1.1 (c)	(50)	(9)	(19)			(1)	(18)		(97)	(47)
Reversal (constitution) for impairment		24								24	(71)
Revision of estimated cash flow				(1)						(1)	145
Changes in the interest rate		(4)		(22)						(26)	11
Transfers		85					103	1		189	94
Closing balance for the year		**6,285**	**5,613**	**202**	**342**	**69**	**158**	**152**	**520**	**13,341**	**12,075**
Cost		9,860	5,613	337	540	268	526	208	918	18,270	16,510
Accumulated amortization		(3,575)		(135)	(198)	(199)	(368)	(56)	(398)	(4,929)	(4,435)
Net closing balance for the year		**6,285**	**5,613**	**202**	**342**	**69**	**158**	**152**	**520**	**13,341**	**12,075**
Average annual amortization and depletion rates - %		**4**		**7**	**7**	**7**	**18**	**10**	**9**		

(i) *Asset Retirement Obligation.*

All amounts in millions of reais unless otherwise stated

(b) Goodwill on acquisitions

Accounting policy

The Company and its subsidiaries use the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred includes the fair value of assets or liabilities resulting from a contingent consideration arrangement, when applicable. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Company and its subsidiaries recognize any non-controlling interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the fair value of the acquiree's identifiable net assets. Non-controlling interests are determined on each acquisition.

	2018	2017
Votorantim Cimentos		
América do Norte	1,208	1,027
Europa, Ásia e África	1,275	1,140
América Latina	12	12
Brasil		
Cimento Vencemos do Amazonas Ltda.	92	
Engemix S.A.	76	76
CJ Mineração Ltda.	16	16
	2,679	**2,271**
Nexa Resources		
US Zinc Corporation		30
Nexa Resources Perú S.A.A.	2,241	1,913
Nexa Resources Cajamarquilla S.A.	358	306
Campos Novos Energia S.A.	26	
Pollarix S.A.	1	1
	2,626	**2,250**
Long steels		
Acergroup S.A.	149	149
Acerholding S.A.	9	15
Acerbrag S.A.	2	3
	160	**167**
CBA		
Campos Novos Energia S.A.	31	58
Metalex Ltda.	49	49
Rio Verdinho Energia S.A.	29	29
Machadinho Energética S.A.	15	15
BAESA - Energética Barra Grande S.A.	7	7
	131	**158**
Holding and other		
Votorantim Andina S.A.	16	16
Fazenda Bodoquena Ltda.	1	1
	17	**17**
	5,613	**4,863**

All amounts in millions of reais unless otherwise stated

(c) Impairment test for goodwill

Assets that have an indefinite useful life, for example goodwill, are not subject to amortization and are tested annually for impairment.

The Company and its subsidiaries evaluate at least annually the recoverability of the carrying value of the operating segment of each CGU. The process of estimating these values involves the use of assumptions, judgments and estimates of future cash flows that represent the best estimate of the Company and its subsidiaries.

The Company's management determined the budgeted gross margin based on past performance and its expectations of market development. The discount rates used are pre-tax and reflect specific risks related to the operating segment or the CGU being tested.

These calculations use cash flow projections, before income tax and social contributions, based on financial budgets approved by management for a five-year period. Cash flow that exceeds the five-year period is extrapolated using the estimated growth rates. The growth rate does not exceed the average long-term growth rate of the operating sector of each segment.

The calculations of the value-in-use were based on the discounted cash flow model, and are based on the assumptions below:

	Growth rate	Discount rate
Cement	0.0% to 1.0%	6,60% a 11,30%
CBA	(ii)	9,64% a 11,14%
Nexa Resources	(ii)	10,34% a 11,98%
Long steels (i)	Not used	11,91% a 17,10%
Holding and other	Not used	8,40% a 9,57%

(i) Considers units located abroad only (Argentina and Colombia).

(ii) Growth rates take into account independent information on LME's projections for quotations (mainly aluminum, zinc and copper).

19 Borrowing

Accounting policy

Borrowings are initially recognized at fair value, net of transaction costs incurred, and subsequently carried at amortized cost. Any difference between the proceeds (net of transaction costs) and the total amount payable is recognized in the statement of income over the period of the borrowings using the effective interest rate method.

Borrowing costs directly related to the acquisition, construction or production of a qualifying asset that requires a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of that asset when it is probable that future economic benefits associated with the item will flow to the Company and costs can be measured reliably. The other borrowing costs are recognized as finance costs in the period in which they are incurred.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and fair value

		Current		Non-current		Total		Fair value	
Type	Average annual charges	2018	2017	2018	2017	2018	2017	2018	2017
Local currency									
Debentures	110.75% CDI	91	1,288	2,718	3,257	2,809	4,545	2,749	4,599
BNDES	TJLP + 2.33% / 1.86% fixed rate BRL / SELIC + 2.92% / IPCA + 5.10%	95	486	635	1,410	730	1,896	687	1,774
Development promotion agency	8.46% Pré BRL / TJLP + 0.65%	51	41	198	208	249	249	246	238
FINAME	4.82% Pré BRL	21	23	68	91	89	114	83	102
Export credit notes			3		100		103		105
Other		11	16	11	11	22	27	20	26
		269	**1,857**	**3,630**	**5,077**	**3,899**	**6,934**	**3,785**	**6,844**
Foreign currency									
Eurobonds - USD	6.06% fixed rate USD	3,077	156	10,742	11,948	13,819	12,104	13,829	12,877
Loans - Law 4131/1962 (i)	LIBOR + 0.97% / 4.04% fixed rate USD	594	176	864	763	1,458	939	1,481	944
Eurobonds - EUR	3.40% fixed rate EUR	978	37	1,541	2,246	2,519	2,283	2,584	2,415
Syndicated loan/bilateral agreements	EURIBOR + 2.00% / LIBOR + 1.10% / 6.14% fixed rate	225	123	1,399	1,192	1,624	1,315	1,626	1,320
Export prepayments	LIBOR + 1.27%		1	765	659	765	660	799	709
BNDES	UMBNDES + 2.46%		112		37		149		152
Export credit notes			1		104		105		107
Working capital	IBR + 2.62% / 5.67% fixed rate COP	111	96			111	96	112	98
Development promotion agency	LIBOR + 1.10%	30		195		225		236	
Other		7	14	24	31	31	45	33	43
		5,022	**716**	**15,530**	**16,980**	**20,552**	**17,696**	**20,700**	**18,665**
		5,291	**2,573**	**19,160**	**22,057**	**24,451**	**24,630**	**24,485**	**25,509**
Current portion of long-term borrowing		4,854	1,743						
Interest on borrowing		324	365						
Short-term borrowing		113	465						
		5,291	**2,573**						

All amounts in millions of reais unless otherwise stated

(i) Loans relating to Resolution 4131/1962 have swaps that are indexed to both exchange rates (LIBOR and fixed rates for floating CDI rates) and currency (US Dollars for reais), and resulted in a final weighted cost of 107.78% p.a. of the CDI. Borrowing of this type relates to compound financial instruments, contracted as a single product with the financial institution (debt in US Dollars + swap to a % of CDI in reais). The terms and conditions of the loan and derivative instrument are configured as a compound operation, so that the resulting cost is a debt adjusted by the CDI in reais. The difference in measurement between the two instruments (loan at amortized cost x derivative at fair value), creates an accounting mismatch in the statement of income. To eliminate this accounting mismatch, some of the borrowing contracts made from August 2015, were designated at fair value, and the effect of this designation is the measurement of debt at fair value through profit or loss, according to Note 30.

Key:

BNDES – National Bank for Economic and Social Development.
BRL – Brazilian currency (Real).
CDI – Interbank Deposit Certificate.
COP – Peso Colombiano.
EUR – European Union currency (Euro).
EURIBOR – Euro Interbank Offered Rate.
FINAME – Government Agency for Machinery and Equipment Financing.
IBR – Interbank Rate (Colombia).
INR – Indian Rupee
IPCA – Extended Consumer Price Index.
LIBOR – London Interbank Offered Rate.
SELIC – Special System for Clearance and Custody.
TJLP – Long-term interest rate set by the National Monetary Council. Until December 2017, the TJLP is the BNDES basic cost of financing. As of January 2018, the Long Term Rate (TLP) became the main financial cost of BNDES financing.
UMBNDES – Monetary unit of the BNDES reflecting the weighted basket of currencies of foreign currency debt obligations. At December 31, 2018, 99% of the basket consisted of US Dollars.
USD – US Dollar.

(b) Changes

	Note	2018	2017
Opening balance for the year		**24,630**	**24,419**
New borrowing		3,639	5,393
Foreign exchange variation		2,771	616
Interest		1,359	1,616
Addition of borrowing fees, net of amortization		26	(22)
Fair value adjustment		(28)	47
Payments - interest		(1,423)	(1,558)
Effect of subsidiaries excluded in consolidation	1.1 (d)	(909)	
Payments - principal		(5,532)	(5,881)
Reclassification from assets classified as held-for-sale		(13)	
Gain on debt renegotiation	3.1.1 (iv)	(69)	
Closing balance for the year		**24,451**	**24,630**

(c) New borrowing and amortizations

Through funding and prepayment of certain debts, the Company seeks to extend the average term of maturities, as well as to balance the exposure to different currencies of loans and financing to its cash generation in these currencies.

The main funding and amortizations made in 2018 were as follows:

All amounts in millions of reais unless otherwise stated

The main funding and amortizations made in 2018 were as follows:

New borrowing

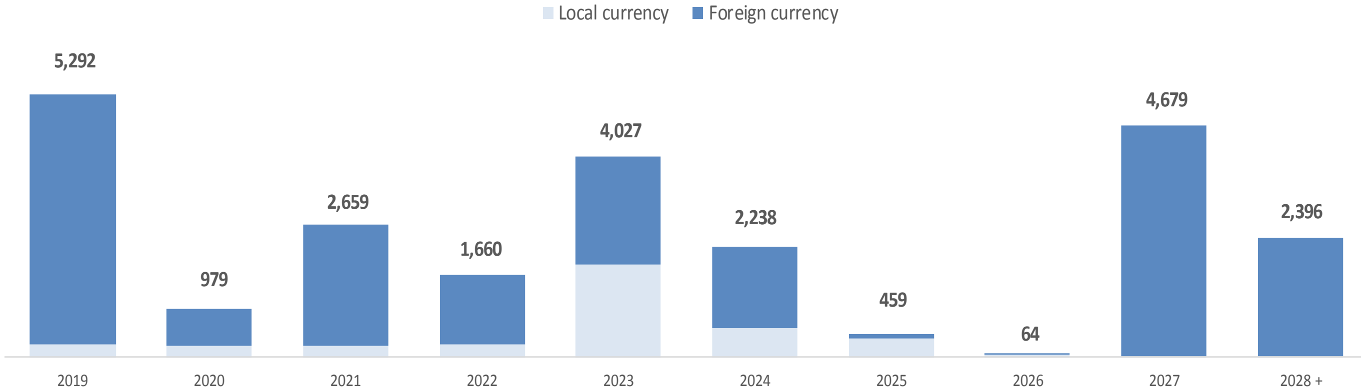
Date	Company	projects	Currency	Principal	Principal BRL	Maturity	Cost
Mar-18	Votorantim Cimentos S.A.	Law 4131/1962	USD	100	325	2023	112.00% CDI
May-18	Nexa Resources S.A.	Export Prepayment	USD	200	737	2023	LIBOR 6M + 1.27%
May-18	Votorantim Cimentos N/NE S.A.	Debentures	BRL	450	450	2023	110.00% CDI
Jun-18	Nexa Resources S.A.	Development Agency	USD	63	240	2026	LIBOR 6M + 1.10%
Aug-18	Votorantim S.A.	Debentures	BRL	550	550	2024	112.00% CDI
Oct-18	Votorantim Cimentos N/NE S.A.	Law 4131/1962	USD	50	202	2023	108% CDI
Dec-18	Companhia Brasileira de Alumínio	BNDES	BRL	39	39	2028	TLP + 4,90%
Dec-18	Nexa Recursos Minerais S.A.	BNDES	BRL	229	229	2028	TLP + 5,23%
Dec-18	Votorantim Cimentos S.A.	BNDES	BRL	57	57	2028	TLP + 4,71%

Amortizations

Date	Company	Type	Currency	Principal	Principal BRL	Maturity	Observation
Jan-18	Votorantim Cimentos S.A.	Debentures	BRL	(500)	(500)	2022	Prepayment
Jan-18	Votorantim Cimentos S.A.	Debentures	BRL	(44)	(44)	2022	Prepayment
Jan-18	Votorantim Cimentos S.A.	Debentures	BRL	(63)	(63)	2022	Prepayment
Jan-18	Votorantim Cimentos S.A.	Debentures	BRL	(94)	(94)	2022	Prepayment
Jan-18	Votorantim Cimentos S.A.	Law 4131/1962	USD	(50)	(161)	2020	Prepayment
Jan-18	Votorantim Cimentos S.A.	BNDES	BRL	(211)	(211)	2018 / 2019 / 2020	Prepayment
Mar-18	Nexa Recursos Minerais S.A.	Export credit notes	BRL	(100)	(100)	2018	
Mar-18	Nexa Recursos Minerais S.A.	Export credit notes	USD	(31)	(102)	2018	
Apr-18	Votorantim Cimentos S.A.	Debentures	BRL	(148)	(148)	2024	Prepayment
Apr-18	Votorantim Cimentos S.A.	Debentures	BRL	(200)	(200)	2023	Prepayment
May-18	Nexa Resources S.A.	Export Prepayment	USD	(100)	(366)	2018	
May-18	Nexa Resources S.A.	Export Prepayment	USD	(40)	(149)	2023	Prepayment
May-18	Nexa Resources S.A.	Export Prepayment	USD	(60)	(224)	2022	Prepayment
Jun-18	Votorantim Cimentos S.A.	Debentures	BRL	(158)	(158)	2023	Prepayment
Jun-18	Votorantim Cimentos S.A.	Debentures	BRL	(294)	(294)	2025	Prepayment
Aug-18	Votorantim S.A.	Debentures	BRL	(550)	(550)	2024	Prepayment
Oct-18	VOTO-Votorantim Overseas Trading Operations IV Limited	Eurobonds	USD	(97)	(359)	2020	Prepayment
Oct-18	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(43)	(181)	2021	Prepayment
Dec-18	Companhia Brasileira de Alumínio	BNDES	BRL	(39)	(39)	2019 / 2020	Prepayment
Dec-18	Nexa Recursos Minerais S.A.	BNDES	BRL	(229)	(229)	2019 / 2020 / 2021 / 2022 / 2023	Prepayment
Dec-18	Votorantim Cimentos S.A.	BNDES	BRL	(57)	(57)	2019 / 2020	Prepayment

All amounts in millions of reais unless otherwise stated

(d) Maturity



(e) Breakdown by currency

	Current		Non-current		Total	
	2018	2017	2018	2017	2018	2017
USD	3,707	366	13,083	13,509	16,790	13,875
Real	269	1,857	3,630	5,077	3,899	6,934
Euro	1,098	110	1,879	2,825	2,977	2,935
Boliviano	64	1	406	395	470	396
Turkish lire	39	47	148	220	187	267
Currencies basket		83		14		97
Other	114	109	14	17	128	126
	5,291	**2,573**	**19,160**	**22,057**	**24,451**	**24,630**

(f) Breakdown by index

	Current		Non-current		Total	
	2018	2017	2018	2017	2018	2017
Local currency						
CDI	91	1,287	2,718	3,259	2,809	4,546
TJLP	79	436	314	1,239	393	1,675
Fixed rate	53	74	209	286	262	360
SELIC	14	55	100	196	114	251
TLP	32		289		321	
Other		5		97		102
	269	**1,857**	**3,630**	**5,077**	**3,899**	**6,934**
Foreign currency						
Fixed rate	4,729	515	13,160	15,549	17,889	16,064
LIBOR	230	5	2,331	1,179	2,561	1,184
EURIBOR	11	39	39	215	50	254
UMBNDES		112		37		149
Other	52	45			52	45
	5,022	**716**	**15,530**	**16,980**	**20,552**	**17,696**
	5,291	**2,573**	**19,160**	**22,057**	**24,451**	**24,630**

All amounts in millions of reais unless otherwise stated

(g) Collateral

As at December 31, 2018, R$ 10,389 (December 31, 2017 – R$ 10,607) of the balance of borrowing of the Company and its subsidiaries were collateralized under promissory notes and sureties and R$ 792 of the property, plant and equipment items (December 31, 2017 – R$ 527) were collateralized by liens on the financed assets.

(h) Covenants/financial ratios

Certain borrowings are subject to compliance with certain financial ratios ("covenants"). When applicable, such obligations are standardized for all borrowing.

The Company and its subsidiaries were in compliance with all of these covenants, as applicable.

20 Confirming payables

The Company and the subsidiaries have entered into agreements with financial institutions, aiming to anticipate receivables from suppliers in the domestic and foreign markets. In this operation, suppliers transfer the right to receive their accounts receivable related to sales of goods to financial institutions.

Operations - Confirming payables	2018	2017
Domestic market	349	148
Foreign market	838	761
	1,187	**909**

21 Current and deferred income tax and social contribution

Accounting policy

The income tax and social contribution expense for the period comprises current and deferred taxes. Taxes on profit are recognized in the statement of income, except to the extent that they relate to items recognized directly in equity. In such cases, the taxes are also recognized in comprehensive income or directly in equity.

The current and deferred income tax and social contribution is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the entities operate and generate taxable income. Management periodically evaluates positions taken by the Company in income tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provision where appropriate on the basis of amounts expected to be paid to the tax authorities.

The current income tax and social contribution are presented net, separated by taxpaying entity, in liabilities when there are amounts payable, or in assets when the amounts prepaid exceed the total amount due on the reporting date.

Deferred tax assets are recognized only to the extent it is probable that future taxable profit will be available against which the temporary differences and/or tax losses can be utilized.

Deferred income tax assets and liabilities are presented net in the balance sheet when there is a legal right and the intention to offset them upon the calculation of current taxes, generally related to the same legal entity and the same taxation authority. Thus, deferred tax assets and liabilities in different entities or in different countries are presented separately, and not net.

All amounts in millions of reais unless otherwise stated

The Company and its subsidiaries are subject to income taxes in all countries in which it operates. The provision for income tax is calculated individually by the entity based on tax rates and rules effective at the entity's location. The Company and its subsidiaries also recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will have an impact on the current and deferred tax assets and liabilities in the period in which the determination is made

(a) Reconciliation of income tax and social contribution expenses

The current amounts are calculated based on the current rates levied on taxable income, adjusted upwards or downwards by the respective additions and exclusions.

The income tax and social contribution amounts presented in the statements of income for the year ended December 31 are reconciled to their Brazilian standard rates as follows:

	Note	2018	2017
Profit before income tax and social contribution		**3,236**	**1,094**
Standard rates		**34%**	**34%**
Income tax and social contribution at standard rates		**(1,100)**	**(372)**
Adjustments for the calculation of income tax and social contribution at effective rates			
Equity		277	415
Differential rate of foreign companies		559	192
Income tax credit paid in foreign IN 1520/14		(219)	(277)
Reprocessing of previous calculations		70	61
Tax on mining operations		(52)	(74)
Dividends received		(53)	(59)
Tax loss carryforward and non-deferred tax base		(60)	(9)
Tax effect of the corporate reorganization VCSA	1.1 (j)	(431)	
Other additions, net		(55)	(13)
Income tax and social contribution calculated		**(1,064)**	**(136)**
Current		(456)	(722)
Deferred		(608)	586
Income tax and social contribution expenses		**(1,064)**	**(136)**
Effective rate - %		**33%**	**12%**

All amounts in millions of reais unless otherwise stated

(b) Breakdown of deferred tax balances

	2018	2017
Tax credits on tax losses	**2,669**	**1,884**
Tax credits on temporary differences		
Estimation for losses on investments, fixed and intangible assets	857	1,181
Foreign exchange gains	761	1,300
Tax, civil and labor provision	574	506
Tax benefit on goodwill	503	465
Asset retirement obligation	182	166
Use of public assets	154	172
Environmental liabilities	128	116
Fair value adjustments	123	(143)
PPR - Provision for profit sharing	113	124
Estimation for inventory losses	78	66
Provision for loan	62	56
Provision for energy charges	49	46
Provision for social security obligations	41	34
Pension funds	3	(18)
Estimated asset disposals	2	20
Other tax credits	194	18
Tax debits on temporary differences		
Borrowing costs	(3)	(3)
Financial instruments - firm commitment	(8)	(61)
Asset retirement obligation	(10)	(6)
Market value Citrosuco	(13)	(154)
Adjustment to present value	(35)	(55)
Deferred of losses on derivative instruments	(77)	63
Gain in fair value in VTRM´s operation	(102)	
Capitalized interest	(141)	(140)
Market value Milpo	(388)	(441)
Goodwill amortization	(405)	(367)
Market value assets	(1,233)	(1,140)
Adjustment of useful lives of PP&E (depreciation)	(2,192)	(1,479)
Other tax debits	(6)	(96)
Net	**1,880**	**2,114**
Net deferred tax assets related to the same legal entity	**4,079**	**4,079**
Net deferred tax liabilities related to the same legal entity	**(2,199)**	**(1,965)**

(c) Effects of deferred income tax and social contribution on the profit for the year and comprehensive income

	2018	2017
Opening balance for the year	**2,114**	**2,072**
Deferred income tax and social contribution on hedge accounting	396	(11)
Effects on the results of the year - discontinued operations	112	(228)
Effects of foreign exchange variations in other comprehensive income	(196)	(41)
Effects on the results for the year - continuing operations	(608)	586
Consumption of tax and social contribution credits for payment of PERT program		(259)
Other	62	(5)
Closing balance for the year	**1,880**	**2,114**

All amounts in millions of reais unless otherwise stated

(d) Realization of deferred income tax and social contribution on tax losses

	2018	Percentage
In 2019	881	33%
In 2020	323	12%
In 2021	238	9%
In 2022	391	15%
After 2023	836	31%
	2,669	**100%**

22 Deferred revenue - obligation for performance

Accounting policy

Deferred revenue, arising from the anticipation of receivables from financial institutions, represents an obligation for the subsidiaries to physically deliver the electric energy already sold to customers and consequently to pass on to the financial institution the amount received from the sale of energy. The obligation is performed monthly, after the transfer of energy to the client and consequent financial transfer to the financial institution.

In December 2014, the subsidiary indirect Votener ceded to a financial institution the receivables due until December 2019 as a result of certain contracts for the Sale of Electric Energy in the Regulated Environment ("CCEAR"), which are being carried out with the physical delivery of energy. This transaction corresponded to R$ 1,252, and has no right of return and/or type of co-obligation of the Company on the receivables. Due to the assignment of receivables, Votener received a total amount of R$ 905, and the interest to be appropriated from the transaction will be recognized pro rata to the result during the term of the agreement.

In May 2015, Votener carried out a second credit assignment operation, without any right of return and/or co-obligation of the subsidiary, in the total amount of R$ 368. By assigning the receivables, Votener received the total amount R$ 251, and interest to be appropriated from the operation will be recognized pro rata to the result during the term of the agreement.

The updated value of these operations at December 31, 2018 was R$ 271 (December 31, 2017, R$ 516).

23 Provision

Accounting policy

The Company and its subsidiaries are a party to tax, civil, labor and other legal claims in progress at different Court levels. Provision against potentially unfavorable outcomes of litigation in progress is established and updated based on management evaluation, as supported by external legal counsel, and requires a high level of judgment regarding the matters involved.

The judicial deposits are monetarily restated and when they have a corresponding provision they are presented net in "Provision". Judicial deposits that do not have a corresponding provision are presented in non-current assets.

(i) Provision for tax, civil, labor, environmental and other legal claims

The Company and its subsidiaries are parties to tax, labor, civil and environmental and other litigation in progress and are discussing these matters at both the administrative and judicial levels. These matters are backed by judicial deposits where applicable.

The provision for tax, civil, labor, environmental and other legal claims is recognized when: (i) the Company has a present legal or constructive obligation as a result of past events, (ii) it is probable that an outflow of resources will be required to settle the obligation, and (iii) the amount can be reliably estimated. Losses classified as possible are not recognized for accounting purposes, and are disclosed in the notes. Contingencies with probability of loss classified as remote are not provisioned nor disclosed, except when the Company and its subsidiaries consider their disclosure justified. The classification of losses between possible, probable and remote is based on the management's assessment, based on the opinion of its legal advisors.

Provision is measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to time elapsing is recognized as interest expense. Provision does not include future operating losses.

(ii) Asset retirement obligations

The calculation of asset retirement obligations involves judgment about certain assumptions. In environmental terms, they refer to the future obligation to restore the ecological conditions similar to those existing before the beginning of the project or activity, or to carry out compensatory measures, agreed upon with the applicable bodies, as a result of the impossibility of returning the areas to the pre-existing condition. These obligations arise from the beginning of the environmental degradation of the area occupied by the operation or from formal commitments made to the environmental body, under which the degradation must be compensated. The dismantling and removal of an asset from an operation occurs when it is permanently retired, through the interruption of its activities, or by its sale or disposal.

Expenditures relating to mine retirement are recorded as asset retirement obligations. The asset retirement cost, equivalent to the present value of the obligation (liability), is capitalized as part of the carrying amount of the asset, which is depreciated over its useful life.

The Company and its subsidiaries recognize a liability based on the fair value for the demobilization of assets in the period in which they occur, against the corresponding intangible asset. The Company and its subsidiaries consider the accounting estimates related to the recovery of degraded areas and the costs of closing a mine as a critical accounting practice because it involves expressive amounts of provisions and these are estimates that involve several assumptions such as interest rates, inflation, useful life of the assets considering the current stage of exhaustion, the costs involved and the projected depletion dates of each mine. These estimates are reviewed annually by the Company and its subsidiaries.

(iii) Obligation for environmental liabilities

The environmental liability must be recognized when there is an obligation on the part of the Company and its subsidiaries that incurred an environmental cost not yet paid, provided that it meets the recognition criteria as an obligation. Therefore, this type of liability is defined as being a present obligation of the Company and its subsidiaries that arose from past events.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and changes

						2018	2017
		Legal claims					
	ARO (i)	Tax	Labor	Civil	Other	Total	Total
Opening balance for the year	**1,275**	**849**	**99**	**317**	**47**	**2,587**	**2,346**
Additions	24	82	142	59	7	314	687
Reversals (ii)	(47)	(90)	(88)	(199)	(10)	(434)	(945)
Judicial deposits, net of write-offs (ii)		(2)	(9)	92	(1)	80	225
Settlement in cash	(41)	(28)	(82)	(4)	(1)	(156)	(182)
Settlements with escrow deposits			(14)			(14)	(2)
Reclassification of liabilities related to assets held for sale							(18)
Effect of subsidiaries included in (excluded from) consolidation	(20)			(2)	(4)	(26)	15
Present value adjustment	67					67	52
Monetary restatement		35	33	12	2	82	216
Foreign exchange variation	79	7	3	8	1	98	28
Revision of estimated cash flow	(3)					(3)	165
Closing balance for the year	**1,334**	**853**	**84**	**283**	**41**	**2,595**	**2,587**

(i) Asset Retirement Obligation.

(ii) Substantially refers to the classification of civil action loss of the subsidiary CBA , which was changed from probable to remote, generating a reversal of the judicial provision in the amount of R$ 104, of which R$ 66 was the principal amount and R$ 38 was the monetary restatement. The lawsuit is in progress, and at December 31, 2018, CBA had amounts deposited in Court in the amount of R$ 104.

(b) Provision for tax, civil, labor, other contingencies and outstanding judicial deposits

	2018				2017			
	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)
Tax	(126)	979	853	545	(124)	973	849	679
Labor	(214)	298	84	80	(205)	304	99	71
Civil	(28)	311	283	124	(120)	437	317	10
Other	(1)	42	41	6		47	47	5
	(369)	**1,630**	**1,261**	**755**	**(449)**	**1,761**	**1,312**	**765**

(i) The Company and its subsidiaries have balances deposited in relation to lawsuits classified by management, following the directions of the legal advisors of the Company and its subsidiaries as remote or possible losses and, herefore, they are made without respective provision.

(c) Litigation with likelihood of loss considered possible

The Company and its subsidiaries are party to litigations representing a risk of possible loss, for which no constituted provision has been made, as detailed below.

	2018	2017
Tax (c.1)	11,162	10,035
Civil (c.2)	7,430	7,215
Environmental	516	496
Labor and social security	374	441
	19,482	**18,187**

All amounts in millions of reais unless otherwise stated

(c.1) Comments on contingent tax and public rights liabilities with likelihood of loss considered possible

The contingent liabilities relating to tax lawsuits in progress with a likelihood of loss considered possible, for which no provision has been recorded, are commented on below. In the table below we present an analysis of the relevance of these lawsuits:

Nature	2018	2017
Tax assessment notice - "IRPJ/CSLL" (i)	1,884	1,794
"IRPJ/CSLL" – Profits abroad (ii)	1,052	765
"ICMS" – Credit (iii)	818	923
Disallowances of "PIS/COFINS" credits (iv)	680	582
Compensation for exploration for mineral resources ("CFEM") (v)	608	571
Disallowance of "IRPJ/CSLL" negative balance (vi)	493	362
Tax assessment notice – "ICMS" (vii)	315	272
Offset of tax loss – 30% limit (merger)	286	276
"ICMS" – Transfer costs (viii)		242
"ICMS" on electricity charges (ix)	204	199
"IRPJ/CSLL" – Transfer costs (x)	198	192
Error in fiscal classification - Importation (xi)	172	163
Collection of ICMS due to divergences regarding the destination of the property (xii)	104	90
"IRPJ/CSLL" – Deduction of expenses (xiii)	74	71
Other lawsuits	4,274	3,533
	11,162	**10,035**

(i) Tax assessment notice – "IRPJ / CSLL"

In December 2016, the subsidiary VCSA was assessed by the Brazilian Federal Revenue Office in the historical amount of R$ 470 demanding the collection of IRPJ and CSLL relating to the period of 2011, due to the alleged undue deduction of operating expenses and costs. In January 2018, the VCSA became aware of the Lower Court decision from the Federal Revenue's Judgment Office, which judged the appeal partially with grounds, reducing the lawsuit by approximately R$ 114. In December 2018, the Appeal of the Administrative Board of Tax Appeals was dismissed and the Voluntary Appeal was partially accepted for the VCSA, at this moment we await the formalization of the Court Decision. As at December 31, 2018, the restated amount of the contingency was R$ 551, of which R$ 51 was assessed as probable loss and was properly accrued, and the remaining R$ 500 was assessed as possible loss.

In December 2017, the VCSA received a tax assessment notice from the Brazilian Federal Revenue Office in the amount of R$ 1,295 for alleged non-payment or underpayment of IRPJ and CSLL relating to the period from 2012 to 2013, due to: (i) capital gain allegedly obtained due to a barter made by the VCSA; and (ii) amortization of goodwill supposedly incorrect. In October 2018, the VCSA took cognizance of the decision of the lower court, which ruled that the VCSA´s challenge was unfavorable. In December 2018, the Appeal of the Administrative Board of Tax Appeals was dismissed and the Voluntary Appeal was partially accepted for the VCSA, at this moment we await the formalization of the Court Decision. At December 31, 2018, the restated amount of the contingency assessed as possible loss was R$ 1,384.

(ii) Profits abroad – "IRPJ/CSLL"

The Company and its subsidiaries have assessments drawn up by the Brazilian Federal Revenue Office, for alleged nonpayment of IRPJ and CSLL, on profits earned abroad by its subsidiaries or affiliates, in the periods of 2007, 2008, 2010, 2012, 2013 and 2014.

The balance substantially composed by the Company, amounted R$ 739 at December 31, 2018 (R$ 607 as at December 31, 2017). All cases are awaiting judgment at the administrative level.

(iii) ICMS credit

Between 2011 and 2013, eight notices of infringement and fines were filed against the Company's subsidiary Citrovita Agro Industrial Ltda. ("CAI"), mainly aimed at the collection of ICMS credited, as highlighted in invoices for the transfer of other subsidiaries, with the specific purpose of export, whose exits are not taxed. The tax assessment notices totaled R$ 819 as at December 31, 2018 (R$ 923 as at December 31, 2017).

Of the eight cases mentioned above, six are awaiting judgment in the administrative sphere, and (i) three of them with a totally unfavorable decision; (ii) and three in which the decisions kept the entries only in part, reducing the amount assessed. In the face of these decisions, appeals were filed by the CAI and the State Treasury Attorney of São Paulo, which are pending judgment by the Tax and Tax Court. Two of them were closed in an unfavorable manner to CAI at the administrative level and are being discussed in Court.

(iv) PIS / COFINS credit statement

Substantially comprised by the subsidiary CBA, which has Decisional Orders and tax assessments relating to the PIS and COFINS credits, referring to the items applied in the production process, which, in the opinion of the Brazilian Federal Revenue Office, would not generate the right to credit of the said contributions. The amount restated as of December 31, 2018 corresponds to R $ 661. Currently, all the processes await administrative decision.

In the opinion of Management and in the opinion of its independent legal advisors, in light of precedents and case law, the likelihood of loss of the process is considered possible.

(v) Financial Compensation for the Exploration of Mineral Resources - CFEM

The subsidiaries Nexa BR, CBA and VCSA had several assessments drawn up by the National Department of Mineral Production - "DNPM" for alleged failure to pay or lower collection of CFEM from 1991 to 2015. As of December 31, 2018, the amount of possible loss amounts to R$ 608.

(vi) IRPJ negative balance credit

VSA, Companhia Nitro Química Brasileira Ltda. (CNQB) (its company sold to third parties), and its subsidiaries CBA and Nexa BR, received decisions regarding the gloss of negative balance of IRPJ credits, totaling the updated amount of R$ 493 as of December 31, 2018. It is expected that the defenses presented in the administrative and judicial spheres by the companies will be judged.

(vii) Tax assessment notice - ICMS

In the fourth quarter of 2016, the subsidiary CAI received a tax assessment notice whose value up to December 31, 2018 amounts R$ 172. The process currently awaits judgment of the special appeal filed by the company before the Tax and Taxes Court of São Paulo Paulo.

In addition, the subsidiary Nexa BR has tax assessments issued by the tax authorities of the State of Minas Gerais, in the amount of R$ 143, of which R$ 127 refers to the incidence of value added tax on sales of certain energy contracts and R$ 16 referring to tax rate applied to interstate sales of manufactured goods with imported content.

(viii) ICMS - Transfer cost

The subsidiary CBA was assessed for alleged failure to collect ICMS due to the nickel carbonate transfer operations for its subsidiary located in the State of São Paulo, for the periods January 2003 to December 2003, April 2004 to March 2005, from April 2005 to March 2006, from April 2006 to March 2007 and from April 2007 to March 2008.

In the opinion of Management and in the opinion of its independent legal advisors, the criteria adopted for the formation of the calculation basis of the prices practiced by the CBA are in accordance with the pertinent legislation and the probability of loss of the process is considered remote.

(ix) ICMS on electricity charges

The subsidiary CBA has judicial and administrative discussions regarding the incidence of ICMS on the sector charges levied on the electricity tariff. As of December 31, 2018, the amount in controversy of these discussions amounts to R$ 204.

In the opinion of Management and in the opinion of its independent legal advisors, the assessment is unfounded, which is why the likelihood of loss of the process is considered possible.

(x) IRPJ/CSLL – Transfer Price

Between 2007 and 2010, four tax assessments were filed against its subsidiary CAI, aiming at the collection of IRPJ and CSLL, and the adjustment in the basis of tax losses and the negative basis of CSLL, due to the losses made in the adjustments made by the Company in this transfer pricing calculations in 2003 and 2004. In October 2017, one of the cases was closed in a favorable manner to the CAI, with the amount of R$ 199 remaining under administrative discussion, restated up to December 31, 2018. The active processes await judgment of appeals by the Administrative Council of Tax Appeals.

(xi) Tax classification mismatch – Import

In March 2017, the subsidiary CBA was assessed on account of a supposed error in the tax classification on the importation of inputs, resulting in the tax requirement (IPI, PIS, COFINS E II), whose value in December 2018 amounts to R$ 172.

Because the undisputed legal counsel wrongly understood the complaint, the subsidiary CBA filed a challenge that was favorably judged in the first administrative instance. Currently, the case awaits judgment by the CARF of the voluntary appeal filed by the Attorney General of the National Treasury.

In the opinion of Management and in the opinion of its independent legal advisors, the likelihood of loss of said process is considered possible.

(xii) Collection of ICMS due to divergences regarding the destination of the item

The subsidiary CBA was assessed for alleged failure to pay ICMS, due to the credit claims arising from the acquisition of assets due to divergences regarding the allocation of assets in the amount of R$ 104.

In the opinion of Management and in the opinion of its independent legal advisors, the criteria adopted in relation to the destination of the assets are in accordance with the pertinent legislation and the probability of loss of the process is considered possible.

(xiii) IRPJ and CSLL - Expense Deduction

In December 2016, the subsidiary CAI was assessed by the RFB for the collection of IRPJ and CSLL, due to the gloss of exclusions from the calculation base of said taxes in the 2011 calendar year. The amounts required by the tax assessment notice total R$ 74. In the last quarter of 2018, a partial cancellation of the tax assessment notice was filed by the Regional Judgment Office (DRJ), and judgment on the Voluntary Appeal filed is currently awaiting.

All amounts in millions of reais unless otherwise stated

(c.2) Comments on contingent civil liabilities with likelihood of loss considered possible

Nature	2018	2017
Public civil suit – Violation of the economic order (i)	4,023	3,872
Administrative investigations carried out by the Secretariat of Economic Law (ii)	2,052	1,994
Litigation with a São Paulo transportation company (iii)		187
Other lawsuits	1,355	1,162
	7,430	**7,215**

(i) Civil class action – Cartel

The Office of the Public Prosecutor of the State of Rio Grande do Norte filed a civil class action against the subsidiary VCSA, together with eight other defendants, including several of Brazil's largest cement manufacturers, alleging the formation of a cartel, demanding that: (1) the defendants make an indemnity payment, jointly, amounting to R$ 5,600, in favor of the civil class action, due to pain and suffering and property collective damage; (2) the defendants make a payment of 10% of the total amount paid by the customers for the acquisition of cement or concrete under the brands owned by the defendants, during the period from 2002 to 2006, due to individual consumer damages; (3) that the defendants pay the following penalties according to Article 23 Section 1 and Article 24 of Law 8,884/1994: (i) in addition to the payment mentioned in item (1) above, a fine ranging from 1% to 30% of annual gross revenues relating to the fiscal year immediately preceding the year in which the alleged violation occurred, but not less than the monetary advantage acquired; and (ii) a prohibition, for a period not shorter than five years, from obtaining financing from governmental financial institutions or from participating in bidding processes conducted by the federal, state or municipal governments and their entities. In view of the total number of the claims in item (1) above in the amount of R$ 5,600 and because of the claims alleging joint liability, VCSA estimated that, based on its market share, its share of the liability would be approximately R$ 2,400. However, there can be no assurance that this apportionment would prevail and that VCSA will not be held liable for a different proportion, which may be larger, or for the total number of these claims. Additionally, there can be no assurance that VCSA will not be required to pay other amounts as compensation for damages caused to consumers as mentioned in item (2) above and/or the fine mentioned in item (3) above.

In the last quarter of 2018 an order was issued rejecting the arguments presented by the defendants and determining the production of expert evidence. At the moment a decision is awaited on the motions to clarify against such order. The likelihood of loss in this matter is considered possible, and the VCSA has not recorded any provision for this claim. As at December 31, 2018, the restated balance of the contingency was R$ 4,023.

(ii) Administrative Proceedings by SDE, currently CADE (Brazilian antitrust agency)

In 2006 the SDE initiated administrative proceedings against the largest Brazilian cement companies, including VCSA, alleging that the large cement companies would have breached Brazilian antitrust laws, such as in terms of price fixing and the formation of a cartel. After the finding of facts, the CADE court judged the lawsuit, issuing the final terms of the judgment on July 29, 2015, applying several penalties to the companies.

The penalties imposed on VCSA include the payment of a fine of approximately R$ 1,566 and an obligation for VCSA to sell: (1) all its interests in other cement and concrete companies in Brazil; (2) 20% of its installed capacity of concrete services in Brazil, in relevant markets in which VCSA has more than one concrete plant; and (3) a specific cement asset that, in CADE's opinion, was directly related to the alleged illegal act of which VCSA is accused. Other non-monetary penalties were also imposed on VCSA, including: (1) the obligation to publish CADE's decision in one of the five biggest Brazilian newspapers; (2) a prohibition against contracting with official financial institutions for credit lines with financing conditions subsidized by public programs or resources provided by these institutions; and (3) a recommendation to the Federal Revenue that they restrict or limit certain other benefits and tax incentives. As at December 31, 2018, the restated balance of the contingency was R$ 2,052.

In November 2015, VCSA filed an annulment action to cancel the decision issued at the administrative level or, at least, to reduce the applied penalties. The injunction was granted on November 24, 2015, suspending the effects of the decision issued by CADE at the administrative level, preventing CADE from demanding the fulfillment of the obligations and/or executing the penalties until a judgment of the merits. CADE was summoned and filed its defense, while VCSA presented its reply in November 2016. Recently, an economic expert evidence has been accepted. The parties indicated technical assistants and made questions. The expert is requested to inform if he accepts the charge and presents an estimate of the fees. The VCSA classified the likelihood of loss on this lawsuit as possible.

During 2017, some construction companies and concrete producers filed lawsuits for indemnity claims against Votorantim Cimentos and other companies which were convicted by CADE, due to the alleged formation of a cartel in the cement and concrete markets, in summary claiming that the cartel caused economic and non-economic losses. In January 2018, the first sentence dismissing the merit of the indemnity claims was issued. In December 2018, there were already 20 decisions dismissing the merit in the lower court. Moreover, eight of these lawsuits already recognized that eventual damages arising from the facts identified in the administrative proceeding of CADE had already expired, of which five were final decisions. In June 2018, this position was confirmed for the first time by the higher court, through a court decision preventing the charging of amounts prior to three years from the filling of the lawsuit.

(iii) Litigation with a transportation company in São Paulo

In September 2003, a transportation company filed a claim against Votorantim Cimentos Brasil S.A. (a company merged into the subsidiary VCSA) seeking compensation for property damages amounting to R$ 84 and pain and suffering in an unspecified amount, alleging that the VCSA failed to honor two oral contracts. The transportation company argued that those breaches resulted in the discontinuation of the activities of its sales department and significant losses to its transportation department. The VCSA filed its response in September 2009, arguing that: (1) the transportation company’s statute of limitations had expired; (2) the VCSA did not change the general conditions of the agreement; and (3) the transportation company was unable to provide the contracted services, which resulted in its insolvency. In August 2011, the Court rejected the argument regarding the expiration of the statute of limitations and determined an expert examination, as requested by the parties. The expert examination was concluded and the report was presented. The parties filed their challenges to the report and the lawsuit was sent to the expert for his opinion. In June 2014, clarifications were provided by the expert. On June 24, 2014, the VCSA’s challenge was filed. In December 2014, the Company received a decision declaring the end of the fact-finding phase and requesting the parties to declare whether they would be interested in holding a conciliation hearing. In July 2016, the request was partially judged, sentencing Votorantim to pay R$ 400 thousand. In October 2016, Votorantim filed an appeal request. In 2018, the Court upheld VCSA's appeal by a majority and dismissed the transportation VCSA's claim as unfounded. As a result, there was a reclassification of the likelihood of loss to remote. As at December 31, 2018, the restated amount of the remote contingency is R$ 203.

All amounts in millions of reais unless otherwise stated

24 Use of public assets

Accounting policy

The amount is originally recognized as a financial liability (obligation) and as an intangible asset (right to use a public asset) which corresponds to the amount of the total annual charges over the period of the agreement discounted to present value (present value of the future payment cash flows).

The subsidiaries own or participate in companies that hold concession contracts in the electrical energy industry. Most of these contracts provide for annual payments from the commencement of operations and are adjusted by the General Market Price Index for the Use of Public Assets.

The contracts have an average duration of 35 years, and the amounts to be paid annually are as follows:

							2018			2017
Plants/Companies	Investor	Concession start date	Concession end date	Payment start date	Ownership interest	Intangible assets (Note 18)	Liabilities	Ownership interest	Intangible assets (Note 18)	Liabilities
Salto Pilão	Companhia Brasileira de Alumínio	nov-01	dec-36	jan-10	60%	184	518	60%	194	493
Salto do Rio Verdinho	Companhia Brasileira de Alumínio	aug-02	sep-37	oct-10	100%	7	21	100%	8	20
Itupararanga	Companhia Brasileira de Alumínio	nov-03	dec-23	jan-04	100%		2	100%	1	2
Piraju	Companhia Brasileira de Alumínio	dec-98	jan-34	feb-03	100%	1	6	100%	1	6
Ourinhos	Companhia Brasileira de Alumínio	jul-00	aug-35	sep-05	100%	1	5	100%	1	5
Baesa - Energética Barra Grande	Companhia Brasileira de Alumínio	jun-01	may-36	jun-07	15%	13	45	15%	14	42
Capim Branco I e Capim Branco II	Pollarix S.A.	aug-01	sep-36	oct-07	13%	3	11	13%	3	10
Picada	Pollarix S.A.	may-01	jun-36	jul-06	100%	17	69	100%	18	65
Enercan - Campos Novos Energia S.A	CBA Energia Participações S.A.	apr-00	may-35	jun-06	24%	2	7	33%	2	6
Enercan - Campos Novos Energia S.A	Pollarix S.A.	apr-00	may-35	jun-06	21%	2	6	0%	1	5
Pedra do Cavalo	Votorantim Cimentos N/NE S.A.	mar-02	apr-37	apr-06	100%	112	499	100%	118	478
						342	1,189		361	1,132
Current							83			76
Non-current						342	1,106		361	1,056
						342	1,189		361	1,132

All amounts in millions of reais unless otherwise stated

25 Pension plan and post-employment health care benefits

Accounting policy

The Company, through its subsidiaries abroad (VCNA, VCEAA, Artigas and APDR) and in Brazil (VCNNE), participates in pension plans managed by a private pension entity, which provide post-employment benefits to employees.

The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date minus the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market interest rates that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation. In countries where there is no active market related to such obligations, market rates for government securities are used.

Actuarial gains and losses arising from changes in actuarial assumptions are recognized within “Carrying value adjustments” in the period in which they arise.

Past-service costs are recognized immediately in the statement of income, unless the changes to the pension plan are conditional on the employees remaining in service for a specified period of time (the vesting period). In this case, past-service costs are amortized on a straight-line basis over the vesting period.

For defined contribution plans, the Company pays contributions to the pension plan administrators on a compulsory, contractual or voluntary basis. The Company no longer has payment obligations once the contributions are paid. Contributions are recognized as employee benefit expense when due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

The Company’s subsidiaries have a defined contribution plan for employees. Certain subsidiaries, however, have a defined benefit plan.

The table below shows where the balances and activities related to post-employment benefit are allocated in the consolidated financial statements.

	2018	2017
Rights recorded in the balance sheet with:		
Pension plan benefits	25	2
Assets recorded in the balance sheet	25	2
Obligations recorded in the balance sheet with:		
Pension plan benefits	155	168
Post-employment healthcare benefits	164	152
Liabilities recorded in the balance sheet	319	320
Expenses recognized in the statement of income with:		
Pension plan benefits	19	20
Post-employment healthcare benefits	12	11
	31	31
Remeasurement with:		
Pension plan benefits - gross amount	(39)	(23)
Deferred income tax and social contribution	5	8
Pension plan benefits - net amount	(34)	(15)

All amounts in millions of reais unless otherwise stated

(a) Defined contribution pension plan

The Company and its Brazilian subsidiaries sponsor private pension plans available to all employees administered by Fundação Senador José Ermírio de Moraes ("FUNSEJEM"), a private, not for profit, pension fund. Under the terms of the regulations of the fund, the contributions of the employees to FUNSEJEM are matched by the sponsors in accordance with the level of remuneration of the employee. For employees whose remuneration is lower than the threshold established by the regulations, the Company matches the contributions that represent up to 1.5% of their monthly remuneration. For employees whose remuneration exceeds the threshold, the Company matches the contributions of employees that represent up to 6% of their monthly remuneration. Voluntary contributions can also be made to FUNSEJEM. Once the plan contributions are made, no additional contributions are required.

(b) Defined benefit pension plan

The Company has subsidiaries with defined pension plans in North America, South America and Europe, which follow similar regulatory standards. The defined benefit pension plans also offer health care and life insurance, among other benefits. The cost of the retirement benefits and the other benefits of the plan granted to employees are determined by the projected benefit method on a pro rata basis considering the length of service and the best expectations of management regarding the return on plan assets, salary adjustments, costs and mortality trends, and the age of retirement of employees.

The amounts recognized in the balance sheet are determined as follows:

	2018	2017
Present value of funded obligations	1,031	1,042
Fair value of plan assets	(814)	(808)
Deficit of funded plans	217	234
Present value of non-funded obligations	68	82
Total deficit of defined benefit pension plans	285	316
Impact of the minimum funding requirement/assets ceiling	9	2
Assets and liabilities in the balance sheet	294	318

The changes in the defined benefit obligation and the fair value of the plan assets during the year were as follows:

	2018					2017
	Present value of funded and unfunded obligations	Fair value of plan assets	Total	Impact of the minimum requirement of the funds/asset ceiling	Total	Total
Opening balance	**1,125**	**(809)**	**316**	**1**	**317**	**320**
Current service cost	9		9		9	9
Finance cost (income)	56	(31)	25		25	20
Past service cost and curtailments	(2)		(2)		(2)	1
	63	**(31)**	**32**		**32**	**30**
Re-measurements:						
Return on assets, excluding the amount included as finance income		29	29		29	(35)
Losses (gains) arising from changes in demographic assumptions	(1)		(1)			13
Losses (gains) arising from changes in financial assumptions	(69)		(69)		(69)	42
Losses arising from experience	(6)		(6)		(6)	(10)
Changes in the asset ceiling, excluding the amount included as finance cost				7	7	(8)
	(76)	**29**	**(47)**	**7**	**(39)**	**2**
Foreign exchange gains (losses)	95	(65)	30		30	6
Contributions:						
Employer		(6)	(6)		(6)	(4)
Payments of the plans:						
Payment of benefits	(99)	63	(36)		(36)	(36)
Assumed/(acquired) in a business combination	(8)	4	(4)		(4)	
Closing balance	**1,100**	**(815)**	**285**	**8**	**294**	**318**

All amounts in millions of reais unless otherwise stated

The defined benefit obligation and the plan assets, by country, are as follows:

												Percentual
						2018						2017
	Brazil	Europe	North America	South America	Colombia	Total	Brazil	Europe	North America	South America	Colombia	Total
Present value of the obligation	43	29	697		263	1,032	49	20	706		268	1,043
Fair value of plan assets	(53)		(619)		(142)	(814)	(52)	(4)	(624)		(128)	(808)
	(10)	29	78		121	218	(3)	16	82		140	235
Present value of non-financial obligations		31	32	5		68		46	32			82
Impact of the minimum requirement of the funds/asset ceiling	8					8	1					1
	(2)	60	110	5	121	294	(2)	62	114	4	140	318

The actuarial assumptions used were as follows:

						2018						2017
	Brazil	Europe	North America	South America	Colombia	Total	Brazil	Europe	North America	South America	Colombia	Total
Discount rate	10.51%	6.12%	3.84%	10.92%	7.50%	7.78%	9.93%	7.25%	3.46%	10.70%	6.80%	7.63%
Inflation rate	5.37%	1.33%	2.00%			2.90%	4.46%	2.85%	2.00%			3.10%
Future salary increases	4.88%	7.00%	2.50%	6.92%		5.33%	5.25%	6.85%	2.50%	6.70%		5.33%
Increases in future pension plans	5.37%				3.50%	4.44%	4.46%				3.50%	3.98%

(c) Post-employment benefits (pension and health care)

The Company operates post-employment health care plans through indirect subsidiaries in North America, VCNA, and in Europe, VCEAA. The accounting method, assumptions and frequency of evaluations are similar to those used for the defined benefit pension plans. Most of these plans are not funded.

The obligations relating to these plans are included in the movement of the defined benefit obligations previously presented.

26 Equity

Accounting policy

(i) Share capital

Share capital is represented exclusively by common shares classified as equity.

(ii) Dividends

This is recognized as a liability in the Company's financial statements at year-end based on the Company's bylaws. Any amount that exceeds the minimum required, 25% of the profit for the year, is only recognized on the date it is approved by the stockholders at a General Meeting. When a Company presents a loss in the year, there is no dividend.

(iii) Earnings per share

Earnings per share are calculated by dividing the profit attributable to the controlling stockholders by the weighted average number of common shares during the year. The weighted average number of shares is calculated based on the periods in which the shares were outstanding.

All amounts in millions of reais unless otherwise stated

(iv) Statutory reserve

The statutory reserve is constituted by the appropriation of 5% of the net income for the fiscal year or remaining balance, limited to 20% of the capital stock. Its purpose is to ensure the integrity of social capital. It can only be used to offset losses and increase capital. When the Company presents a loss in the year, there will be no legal reserve.

The retained earnings reserve refers to the retention of the remaining balance of retained earnings in order to meet the business growth plan established in the Company's investment plan.

(v) Government grants

The tax incentive reserve is credited with tax incentive benefits, which are recognized in the income statement for the year and allocated to retained earnings for this reserve. These incentives are not included in the calculation of the mandatory minimum dividend.

(vi) Equity valuation adjustments

The equity valuation adjustments include:

(a) Effective portion of the cumulative net change in fair value of hedge instruments used in hedge of cash flow until the recognition of the cash flows that were hedged.

(b) Cumulative translation adjustments with the exchange differences arising from the translation of the financial statements of foreign operations.

(c) Effective portion with exchange differences of hedge of the Company's net investments in a foreign operation.

(d) Actuarial losses (gains) and measures with retirement benefits.

(a) Share capital

On December 31, 2018 and December 31, 2017, the fully subscribed and paid-up capital of the Company was R$ 28,656, consisting of 18,278,789 thousand common shares.

(b) Dividends

The calculation of mandatory dividends at December 31 can be shown as follows:

	2018	2017
Net income (loss) attributable to controlling shareholders	1,746	590
Legal reserve	(87)	(30)
Dividend calculation basis	1,659	560
Dividends	**415**	**140**
Percentage of net income for the year	25%	25%

During 2018, the Company approved to its parent company Hejoassu Administração S.A, the amount of R$ 789, corresponding to dividends related to part of the balance of the "Profit Reserve" account, accumulated up to December 31, 2017.

On April 30, 2018, the Ordinary and Extraordinary General Shareholders' Meeting resolved the cancellation of the mandatory minimum dividends of 2017 in the amount of R$ 140.

All amounts in millions of reais unless otherwise stated

(c) Carrying value adjustments

	Attributable to the owners of the Company						
	Currency translation of investees located	Hedge accounting for net investments abroad, net of taxes	Hedge accounting for the operations of subsidiaries	Remeasurement of retirement benefits	Fair value of available-for-sale assets	Other comprehensive income	Total
At January 1, 2017	**5,246**	**(4,342)**	**(30)**	**(78)**	**227**	**232**	**1,255**
Other comprehensive income							
Currency translation of investees located abroad	473						473
Hedge accounting for net investments abroad, net of taxes		(163)					(163)
Hedge accounting for the operations of subsidiaries			(101)				(101)
Remeasurement of retirement benefits				1			1
Fair value of available-for-sale financial assets of non-consolidated investments					39		39
Realization of comprehensive income on disposal of investments	(136)						(136)
Realization of comprehensive incomeon the sale of interst in Nexa Resources S.A.	(593)	330	13	(4)		(165)	(419)
Increase in noncontrolling interest - Nexa Resources S.A. - dilution interest						(215)	(215)
At December 31, 2017	**4,990**	**(4,175)**	**(118)**	**(81)**	**266**	**(148)**	**734**
Other comprehensive income							
Currency translation of investees located abroad	1,555						1,555
Hedge accounting for net investments abroad, net of taxes		(931)					(931)
Hedge accounting for the operations of subsidiaries			158				158
Remeasurement of retirement benefits				34			34
Fair value of available-for-sale financial assets of non-consolidated investments					(74)		(74)
Realization of comprehensive income on disposals of investments						(4)	(4)
Share in other comprehensive income of investees						3	3
At December 31, 2018	**6,545**	**(5,106)**	**40**	**(47)**	**192**	**(149)**	**1,475**

All amounts in millions of reais unless otherwise stated

(d) Non-controlling interests

	2018	2017
Nexa Resources S.A. (i)	3,431	2,967
Nexa Resources Cajarmarquilla S.A.	885	795
Nexa Resources Perú S.A.A	564	406
Cementos Artigas S.A.	212	204
Asment de Témara	165	170
Yacuces, S.L.	139	125
Itacamba Cemento S.A.	99	92
Shree Dijivay Cement Co. Ltd	21	54
Yibitas Yozgat Isci Birligi Insaat M.T.S	18	22
Acerías Paz Del Rio S.A.	22	12
Other	67	9
	5,623	4,856

(i) The variation refers to the issuance of new shares and sale of interest by VSA.

27 Net revenue from products sold and services rendered

Accounting policy

Revenue represents the fair value of the consideration received or receivable from the sale of goods in the ordinary course of business of the subsidiaries. Revenue is shown net of value added tax, rebates and discounts after elimination of sales among consolidated companies.

The subsidiaries recognizes revenue when: (i) the amount of revenue can be measured reliably; (ii) it's probable that future economic benefits will flow to the entity; and (iii) specific criteria have been met for each of the Company's and its subsidiaries' activities.

Revenue will not be reliably measured if all terms of sale aren't resolved. The subsidiaries bases its estimates on historical results, taking into account the type of customer, the type of transaction and the specificities of each agreement.

Revenue recognition is based on the following principles:

(i) Sales of products and service

Revenue is shown net of value added tax, returns, rebates and discounts, after eliminating sales within the consolidated companies.

(ii) Sale of surplus energy

The sale of energy, which meets the definition of a financial instrument, is recognized in the Company's financial statements at its fair value.

All amounts in millions of reais unless otherwise stated

(a) Reconciliation of revenues

	2018	2017
Gross revenue		
Sales of products - domestic market	15,901	13,620
Sales of products - foreign market	17,029	13,730
Supply of electrical energy	3,314	3,299
Services provided	521	486
	36,765	31,135
Taxes on sales, services and other deductions	(4,817)	(4,336)
Net revenue	**31,948**	**26,799**

(b) Information on geographical areas in which the Company operates

The geographical areas are determined based on the location of the customers. The net revenue of the subsidiaries classified by currency and destination, is as follows:

(i) Revenue by destination

	2018	2017
Brazil	15,400	13,290
United States	3,977	2,910
Peru	2,459	2,234
Argentina	1,421	1,127
Colombia	1,260	991
Canada	1,137	1,062
Spain	676	487
Turkey	663	682
Luxembourg	631	418
Switzerland	598	567
Morocco	447	394
Uruguay	390	307
Japan	344	227
Bolívia	304	222
China	278	153
Belgium	257	110
Tunisia	232	199
Taiwan	231	147
Chile	202	148
Austria	147	119
Singapore	139	194
Alemanha	76	75
Equador	64	65
Italia	50	67
India	29	181
Other countries	536	423
	31,948	**26,799**

All amounts in millions of reais unless otherwise stated

(ii) Revenue by currency

	2018	2017
Real	15,028	12,813
US Dollar	11,099	8,974
Dólar Canadense	1,127	1,017
Colombian Peso	1,066	834
Argentinian Peso	1,062	857
Euro	729	519
Turkish Lira	488	567
Dirham	447	394
Dinar	232	199
Other currencies	670	625
	31,948	**26,799**

28 Expenses by nature

				2018	2017
	Cost of products sold and services rendered	Selling	General and administrative	Total	Total
Raw materials, inputs and consumables	16,363	9	9	16,381	12,850
Employee benefit expenses	3,239	374	1,087	4,700	4,016
Depreciation, amortization and depletion	2,361	15	94	2,470	2,325
Outsourced services	1,362	64	598	2,024	1,560
Transportation expenses	1,784	33		1,817	1,154
Other expenses	800	280	385	1,465	1,980
	25,909	**775**	**2,173**	**28,857**	**23,885**

29 Employee benefit expenses

(a) Health care (post-retirement)

The liability related to the health care plan for retired employees is stated at the present value of the obligation, less the market value of the plan assets, adjusted by actuarial gains and losses and past-service costs, in a manner similar to the accounting methodology used for defined benefit pension plans. The post-retirement health care obligation is calculated annually by independent actuaries. The present value of the post-retirement health care obligation is determined based on an estimate of the future cash outflow.

Actuarial gains and losses arising from changes in actuarial assumptions are fully recognized within "Carrying value adjustments" in the period in which they arise.

(b) Employee profit sharing

Provision is recorded to recognize the expenses related to employee profit sharing. This provision is calculated based on qualitative and quantitative targets established by management and recorded in the statement of income as "Employee benefits".

	2018	2017
Salaries and bonuses	2,951	2,469
Payroll charges	1,040	947
Benefits	709	600
	4,700	**4,016**

All amounts in millions of reais unless otherwise stated

30 Other operating expenses, net

	Note	2018	2017
Tax recovery (i)		498	
Gain in fair value in VTRM´s operation	1.1 (c)	300	
Net income from sale of investment - US Zinc	1.1 (i)	126	
Tax benefits		110	74
Gain (loss) on hedge		75	(63)
Income from rentals and leasing		57	73
Reversal for impairment of investments, fixed and intangible assets		52	23
Net income from waste sale		48	29
Gain (loss) on sale of fixed and intangible assets, net		42	4
Insurance operations		15	(26)
Realization of other comprehensive income - Nexa			750
Realization of other comprehensive income - Others			3
Net income from sale of investment - Nexa			(161)
Gain on sale of investments - Cement and Metals Operations		(3)	33
Reversal (provision) of environmental obligations		(6)	(30)
Provision, net		(18)	(223)
Royalties on natural resources		(46)	(37)
Financial instrument - firm commitment	15	(132)	(522)
Expenses on not activatable projects (ii)		(575)	(316)
Other income (expenses), net		7	(164)
		550	**(553)**

(i) Relates substantially to the credit of PIS and COFINS Granted in subsidiaries VCSA and Nexa BR, mounting R$ 308 and R$ 130, respectively, as described on Note 1.1(h).

(ii) Relates substantially to mineral exploration projects that are in the early stages of research.

31 Finance results, net

Accounting policy

(i) Financial income (expenses)

These comprise interest rates on loans and financial investments, monetary and exchange variation on assets and liabilities, linked to loans with a swap instrument, as a result of the exchange variation net of gains and losses on derivative financial instruments (swap contracts) and various discounts that are recognized in the income for the year on the accrual basis.

(ii) Foreign exchange variations

A foreign currency transaction shall be initially recognized in the functional currency by applying the spot exchange rate between the functional currency and the foreign currency on the transaction date on the amount in foreign currency.

At the end of each reporting period, monetary items in foreign currency must be converted using the closing exchange rate.

Foreign exchange variations arising from the settlement of monetary items or the translation of monetary items at rates different from those for which they were converted at the initial measurement during the period or in previous financial statements shall be recognized in the statement of income in the year in which they arise.

All amounts in millions of reais unless otherwise stated

	Note	2018	2017
Finance income			
Income from financial investments		389	583
Fair value of borrowing		42	61
Reversal of monetary restatement of provision		103	207
Interest on financial assets		476	119
Gain on debt renegotiation	3.1.2 (iv)	69	
Monetary updating of assets		64	119
Discounts obtained		35	29
Interest on related-party transactions	14	2	10
Interest and monetary restatement - use of public assets (i)			6
Other finance income		81	19
		1,261	**1,153**
Finance costs			
Interest on borrowing		(1,394)	(1,580)
Capitalization of borrowing costs		43	29
Monetary restatement of provision		(194)	(268)
Fair value of borrowing and financing		(155)	(117)
Interest and monetary restatement - use of public assets		(108)	(3)
Interest on anticipation of receivables		(101)	(101)
Adjustment to present value CPC 12		(96)	(83)
Borrowing fees		(102)	(40)
Income tax on remittances of interest abroad		(111)	(120)
Interest on silver streaming		(27)	
"PIS/COFINS" on financial results		(46)	(38)
Interest on taxes payable		(13)	24
Interest on related-party transactions	14	(4)	(3)
Interest on Mato Grosso State Credit Recovery Program ("REFIS")			(40)
Interest on Special Tax Regularization Program ("PERT")			(107)
Charges on discount operations		(18)	
Other finance costs		(205)	(258)
		(2,531)	**(2,705)**
Results of derivative financial instruments	6.1.1 (c)		
Revenue		370	3
Expenses		(166)	(216)
		204	**(213)**
Foreign exchange variation, net		(977)	(724)
Finance results, net		**(2,043)**	**(2,489)**

(i) Refers substantially to the PIS and COFINS credit recognized in the subsidiaries VCSA and Nexa BR, in the amounts of R$ 242 and R$ 101, respectively, according to (Note 1.1 (h)).

(ii) In 2017, the subsidiary CBA and indirect subsidiary VCNNE recognized a monetary adjustment revenue on “UBP” - Use of the Public Asset, as a result of the index used to update (“IGP-M” General Market Price Index).

32 Tax benefits

VCSA and its subsidiaries have tax incentives within certain state and federal industrial development programs. The state programs are aimed at attracting industrial investments seeking regional decentralization, promoting employment and income generation, besides complementing and diversifying the industrial matrix of the states. These fiscal incentives are approved by the states in the form of percentage financing of up to 75%, presumed credit with a percentage of up to 95% and deferral of the payment of taxes or partial reductions of the amount due for imports of assets and inputs.

All amounts in millions of reais unless otherwise stated

33 Insurance

The Company and its subsidiaries maintain property risk insurance coverage amounting to R$ 59,253 and for loss of income amounting to R$ 11,695 on December 31, 2018. The Company's management considers these amounts sufficient to cover eventual property risks and loss of profits.

In addition to the previous risk insurance, the Company and its subsidiaries maintain the policies of civil liability of executives and directors in amounts considered adequate by Management.

34 Assets and liabilities classified as held-for-sale

Accounting policy

They are classified as assets held-for-sale when their book value is recovered, mainly through sale and when the sale is considered highly probable.

The asset or group of assets to be classified as held-for-sale should be measured at initial recognition at the lower of its book value if it were not classified as such and the fair value less costs to sell. If the asset or group of assets is acquired as part of a business combination, it must be measured at fair value less costs to sell. When the sale is expected to occur after one year, the entity shall measure selling expenses at present value. Any increase in the present value of selling expenses that results from the passage of time should be presented in the results as financial expense.

Depreciation of assets held for trading ceases when a group of assets is designated as held-for-sale. The assets and liabilities of the group of discontinued assets are presented in single lines in assets and liabilities.

	Assets	Liabilities	Net investment
Cellulose Segment - Fibria Celulose S.A. (a)	4,305		4,305
Cement segment - India and China operations (b)	222	108	114
	4,527	108	4,419

(a) Pulp segment

On March 15, 2018, the Company together with BNDES Participações SA - BNDESPAR (jointly, "Controlling Shareholders of Fibria"), entered into an agreement with Suzano Holding SA and all other shareholders of Suzano Papel e Celulose SA (together, Suzano Controlling Shareholders "), the Voting Commitment and the Assumption of Obligations, by which are the Controlling Shareholders of Fibria and the Controlling Shareholders of Suzano, with the Commitment"), through a corporate reorganization ("Operation").

In compliance with the accounting rule to position itself as a high risk company, the Company began to be a reclassification of the investment in the book value. The fair value of the transaction exceeds the carrying amount.

The terms and conditions of the transaction must be submitted to the second paragraph of the Protocol and the Prospects for Merger of Shares and Company, and must be submitted to the evaluation of sets of data and additional documents to the Boards of Directors of Fibria and Suzano by its administrations, as well as, in due course, the deliberation of the Extraordinary General Meetings of Fibria and Suzano.

On October 11, 2018, Fibria announced through the Notice to the Market that the opinion of the General Superintendency, which regulates, without restriction, a combination of business and a shareholder transaction between Fibria and Suzano.

On November 29, 2018, a European Commission competition was held, checking all the precedents of the transaction for a business association and shareholder base.

All amounts in millions of reais unless otherwise stated

On December 3, 2018, Fibria approved interim dividends in the amount of R$ 2,783, of which a portion corresponds to a Company in the amount of R$ 820 in dividends received in the income for the year.

(i) Financial basis of the operation

Pursuant to the Undertaking, a corporate reorganization shall be submitted to the shareholders of Fibria and Suzano, which will result in: (a) the ownership by Suzano of all the shares issued by Fibria; and (b) the receipt by Fibria's shareholders, for each common share issued by Fibria, of (i) R$ 52.50 (fifty-two Reais and fifty cents), adjusted for the CDI variation from March 16, 2018 and (ii) 0.4611 (zero, comma, four, six, one, one) common shares issued by Suzano , adjusted as mentioned below ("Exchange Ratio"), to be delivered also on the date of consummation of the Transaction.

In addition to the adjustment for the CDI variation, as indicated above, the Cash Portion will be adjusted based on dividends, interest on shareholders' equity and other earnings declared by Fibria and Suzano as of March 15, 2018, except for the minimum dividends obligations already disclosed to the market by Fibria and Suzano. The Exchange Ratio will be proportionally adjusted for eventual splits, splits and bonuses of the shares issued by Fibria and Suzano.

(b) Cement segment

The assets and liabilities of the cement segment correspond to India's operations and the remaining assets of China.

(c) Income from discontinued operations

	Cement	Siderurgy	Total
VSA			
Contribution of capital, net of taxes - long steel in Brazil		(160)	(160)
VCEAA			
Income from the sale of assets and liabilities of India and China.	(58)		(58)
Loss for the year 2017	**(58)**	**(160)**	**(218)**

35 Supplemental information – Business segments

In order to provide more detailed information the Company has elected to present financial information organized into two business segments. Each segment presented has been prepared following the accounting consolidation policies in note 22 and consider, first, the elimination of balances and transactions among the companies before: (i) eliminations between business segments; (ii) eliminations of investments held by the holding companies.

Additionally, the eliminations and reclassifications among the companies are presented so that the net results reconcile with the consolidated financial information of VSA according to the supplementary information. This supplementary information is not intended to be in accordance with, and is not required by, the accounting practices adopted in Brazil, or by IFRS.

All amounts in millions of reais unless otherwise stated

(a) Capital management

The financial leverage ratios are calculated according to the information of the industrial segments, considering the accumulated result of 12 months, as loan covenants, are summarized as follows:

		Industrial segments	
Adjusted EBITDA	**Note**	**2018**	**2017**
Net income for the year		**1,953**	**810**
Plus (less):			
Continuing operations			
Equity in the results of investees		(1,634)	(1,197)
Net financial results		2,051	2,503
Income and social contribution taxes		1,066	138
Depreciation, amortization and depletion		2,471	2,325
Discontinued operations			
Equity in the results of investees			(151)
Net financial results		2	99
Income and social contribution taxes		(99)	126
Depreciation, amortization and depletion		39	35
EBITDA before other additions and exceptional items		**5,849**	**4,688**
Plus :			
Dividends received		942	489
Extraordinary items			
EBITDA - discontinued operations		65	306
Non-recurring items - discontinued operations		211	(267)
Gain on sale of investments, net		(130)	(625)
Reversal for impaiment of property, plant, equipment and intangible assets		(24)	(23)
Reversal for impairment of investments			(71)
Fair value of biological assets			8
PERT payment with deferred tax credit			99
Gain by adjustment to fair value in deconsolidation of VTRM	1.1 (d)	(302)	
Other		322	113
Adjusted annualized EBITDA (A)		**6,933**	**4,717**
Net debt			
Borrowing	19	24,451	24,630
Cash and cash equivalents, financial investments and derivative financial instruments		(11,237)	(12,274)
Net debt (B)		**13,214**	**12,356**
Gearing ratio (B/A)		**1.91**	**2.62**

All amounts in millions of reais unless otherwise stated

(b) Balance sheet - business segments

Assets	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
											2018
Current											
Cash and cash equivalents, financial investments and derivative financial instruments	3,946	4,401	738	176	121	1,820		11,202	71		11,273
Trade receivables	903	671	490	182	445	94	(239)	2,546			2,546
Inventory	1,604	1,045	827	337		1		3,814			3,814
Taxes recoverable	348	370	356	72	10	233		1,389	84		1,473
Dividends receivable					9	101	(68)	42	9	(37)	14
Financial instruments - firm commitment			116		86			202			202
Other assets	269	106	52	46	2	89		564			564
	7,070	6,593	2,579	813	673	2,338	(307)	19,759	164	(37)	19,886
Assets classified as held-for-sale	222					4,305		4,527			4,527
	7,292	6,593	2,579	813	673	6,643	(307)	24,286	164	(37)	24,413
Non-current assets											
Long-term receivables											
Financial investments and derivative financial instruments	140	1	2			136		279			279
Financial instruments - put option						744		744			744
Taxes recoverable	1,328	342	656	14		391		2,731			2,731
Related parties	27	3	1	15	233	940	(948)	271			271
Deferred income tax and social contribution	426	779	782	148		1,415	504	4,054	25		4,079
Judicial deposits	564	36	124	2		29		755			755
Financial instruments - firm commitment											
Other assets	434	88	13	38	1	111		685			685
	2,919	1,249	1,578	217	234	3,766	(444)	9,519	25		9,544
Investments	787	1	197		1,796	30,365	(22,281)	10,865	5,058	(5,041)	10,882
Property, plant and equipment	12,610	7,020	4,830	1,135	36	549		26,180			26,180
Intangible assets	6,038	7,535	501	28	546	209	(1,516)	13,341			13,341
Biological assets			4	5		65		74			74
	22,354	15,805	7,110	1,385	2,612	34,954	(24,241)	59,979	5,083	(5,041)	60,021
Total assets	29,646	22,398	9,689	2,198	3,285	41,597	(24,548)	84,265	5,247	(5,078)	84,434

(*) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

											2018
Liabilities and equity	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Current liabilities											
Borrowing	3,496	126	118	111		1,440		5,291			5,291
Derivative financial instruments	30	55	58			23		166			166
Confirming payable	658	273	256					1,187			1,187
Trade payables	1,781	1,500	391	405	385	17	(217)	4,262			4,262
Salaries and payroll charges	375	225	119	32	20	74		845			845
Taxes payable	318	52	32	71	12	5		490			490
Advances from customers	32	12	29	48	2	5		128			128
Dividends payable	20	2	4		59	454	(57)	482	37	(37)	482
Use of public assets	33	6	44					83			83
Related parties			223				(223)				
Financial instruments - firm commitment	19							19			19
Deferred revenue - performance obligation					242			242			242
Deferred revenue - silver streaming		124						124			124
Other	401	173	50	24	1	158		807	1		808
	7,163	2,548	1,324	691	721	2,176	(497)	14,126	38	(37)	14,127
Liabilities related to assets held-for-sale	108							108			108
	7,271	2,548	1,324	691	721	2,176	(497)	14,234	38	(37)	14,235
Non-current liabilities											
Borrowing	10,049	5,395	1,941			1,775		19,160			19,160
Derivative financial instruments	75					3		78			78
Deferred income tax and social contribution	569	1,157		1	107	197		2,031	168		2,199
Related parties	177	6	13	630	2	71	(763)	136			136
Provision	1,083	838	471	97	2	104		2,595			2,595
Use of public assets	467	80	559					1,106			1,106
Pension plan	197			122				319			319
Financial instruments - firm commitment	35		82		44			161			161
Deferred revenue - performance obligation					29			29			29
Deferred revenue - silver streaming		650						650			650
Other	186	307	53	177	6	195		924			924
	12,838	8,433	3,119	1,027	190	2,345	(763)	27,189	168		27,357
Total liabilities	20,109	10,981	4,443	1,718	911	4,521	(1,260)	41,423	206	(37)	41,592
Equity											
Total equity attributable to owners of the Company	8,815	9,399	5,064	328	2,374	37,076	(25,837)	37,219	5,041	(5,041)	37,219
Non-controlling interests	722	2,018	182	152			2,549	5,623			5,623
Total equity	9,537	11,417	5,246	480	2,374	37,076	(23,288)	42,842	5,041	(5,041)	42,842
Total liabilities and equity	29,646	22,398	9,689	2,198	3,285	41,597	(24,548)	84,265	5,247	(5,078)	84,434

(*) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

(c) Statement of income - business segments

											2018
	Votorantim Cimentos	Nexa Resources	CBA	Long steels (**)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Continuing operations											
Net revenue from products sold and services rendered	12,610	9,066	5,417	2,112	4,456	1,064	(2,777) (*)	31,948			31,948
Cost of products sold and services rendered	(10,224)	(6,904)	(4,468)	(1,844)	(4,283)	(963)	2,777 (*)	(25,909)			(25,909)
Gross profit	**2,386**	**2,162**	**949**	**268**	**173**	**101**		**6,039**			**6,039**
Operating income (expenses)											
Selling	(613)	(69)	(36)	(25)		(32)		(775)			(775)
General and administrative	(810)	(553)	(197)	(133)	(94)	(373)		(2,160)	(13)		(2,173)
Other operating income (expenses), net	596	(345)	(35)	182	345	(82)	(111)	550			550
	(827)	**(967)**	**(268)**	**24**	**251**	**(487)**	**(111)**	**(2,385)**	**(13)**		**(2,398)**
Operating profit (loss) before equity results and finance results	**1,559**	**1,195**	**681**	**292**	**424**	**(386)**	**(111)**	**3,654**	**(13)**		**3,641**
Result from equity investments											
Equity in the results of investees	120		(27)		39	1,323	(645)	810	530	(526)	814
Dividends received						820		820			820
Realization of other comprehensive income on disposal of investments	4							4			4
	124		**(27)**		**39**	**2,143**	**(645)**	**1,634**	**530**	**(526)**	**1,638**
Finance results, net											
Finance income	647	233	152	15	108	230	(132)	1,253	8		1,261
Finance costs	(1,250)	(417)	(395)	(152)	(154)	(295)	132	(2,531)			(2,531)
Results of derivative financial instruments	34	(9)		4		175		204			204
Foreign exchange gains (losses), net	(319)	(538)	(283)	(33)		(218)	414	(977)			(977)
	(888)	**(731)**	**(526)**	**(166)**	**(46)**	**(108)**	**414**	**(2,051)**	**8**		**(2,043)**
Profit (loss) before income tax and social contribution	**795**	**464**	**128**	**126**	**417**	**1,649**	**(342)**	**3,237**	**525**	**(526)**	**3,236**
Income tax and social contribution											
Current	(127)	(251)	(26)	(70)	(23)	41		(456)			(456)
Deferred	(600)	107	(48)	87	(116)	63	(103)	(610)	2		(608)
Profit (loss) from continuing operations	**68**	**320**	**54**	**143**	**278**	**1,753**	**(445)**	**2,171**	**527**	**(526)**	**2,172**
Discontinued operations											
Loss from discontinued operations	(58)					(160)		(218)			(218)
Profit (loss) for the year	**10**	**320**	**54**	**143**	**278**	**1,593**	**(445)**	**1,953**	**527**	**(526)**	**1,954**
Profit (loss) attributable to the owners of the Company	(46)	274	43	97	278	1,593	(493)	1,746	526	(526)	1,746
Profit attributable to non-controlling interests	56	46	11	46			48	207	1		208
Profit (loss) for the year	**10**	**320**	**54**	**143**	**278**	**1,593**	**(445)**	**1,953**	**527**	**(526)**	**1,954**

(*) Relates to the net revenue from electric energy operations to CBA and VCSA.
(**) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

	Votorantim Cimentos	Nexa Resources	CBA	Long steels (**)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
											2017
Continuing operations											
Net revenue from products sold and services rendered	10,928	7,764	4,423	1,659	4,124	864	(2,963) (*)	26,799			26,799
Cost of products sold and services rendered	(8,726)	(5,543)	(3,773)	(1,430)	(3,873)	(789)	2,963 (*)	(21,171)			(21,171)
Gross profit	**2,202**	**2,221**	**650**	**229**	**251**	**75**		**5,628**			**5,628**
Operating income (expenses)											
Selling	(578)	(59)	(24)	(22)		(18)		(701)			(701)
General and administrative	(807)	(500)	(205)	(89)	(82)	(289)		(1,972)	(41)		(2,013)
Other operating income (expenses), net	(207)	(409)	279	46	(258)	585	(589)	(553)			(553)
	(1,592)	**(968)**	**50**	**(65)**	**(340)**	**278**	**(589)**	**(3,226)**	**(41)**		**(3,267)**
Operating profit (loss) before equity results and finance results	**610**	**1,253**	**700**	**164**	**(89)**	**353**	**(589)**	**2,402**	**(41)**		**2,361**
Result from equity investments											
Equity in the results of investees	157	(4)	12		20	1,260	(251)	1,194	315	(290)	1,219
Realization of other comprehensive income on disposal of investments	3							3			3
	160	**(4)**	**12**		**20**	**1,260**	**(251)**	**1,197**	**315**	**(290)**	**1,222**
Finance results, net											
Finance income	659	88	177	18	119	209	(131)	1,139	14		1,153
Finance costs	(1,572)	(332)	(404)	(89)	(152)	(287)	131	(2,705)			(2,705)
Results of derivative financial instruments	(169)	(2)				(42)		(213)			(213)
Foreign exchange gains (losses), net	(205)	(154)	18	(1)		(417)	35	(724)			(724)
	(1,287)	**(400)**	**(209)**	**(72)**	**(33)**	**(537)**	**35**	**(2,503)**	**14**		**(2,489)**
Profit (loss) before income tax and social contribution	**(517)**	**849**	**503**	**92**	**(102)**	**1,076**	**(805)**	**1,096**	**288**	**(290)**	**1,094**
Income tax and social contribution											
Current	(163)	(390)	(54)	(61)	(43)	(11)		(722)			(722)
Deferred	4	57	68	42	86	132	195	584	2		586
Profit (loss) for the year from continuing operations	**(676)**	**516**	**517**	**73**	**(59)**	**1,197**	**(610)**	**958**	**290**	**(290)**	**958**
Discontinued operations											
Profit (loss) from continuing operations	56					(204)		(148)			(148)
Profit (loss) for the year	**(620)**	**516**	**517**	**73**	**(59)**	**993**	**(610)**	**810**	**290**	**(290)**	**810**
Profit (loss) attributable to the owners of the Company	(682)	330	518	78	(59)	993	(588)	590	290	(290)	590
Profit (loss) attributable to non-controlling interests	62	186	(1)	(5)			(22)	220			220
Profit (loss) for the year	**(620)**	**516**	**517**	**73**	**(59)**	**993**	**(610)**	**810**	**290**	**(290)**	**810**

(*) Relates to the net revenue from electric energy operations to CBA and VCSA.
(**) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

(d) Adjusted EBITDA - business segments

										2018
	Votorantim Cimentos	Nexa Resources	CBA	Steel (**)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Total, consolidated
Net revenue from products sold and services rendered	12,610	9,066	5,417	2,112	4,456	1,064	(2,777) (*)	31,948		31,948
Cost of products sold and services rendered	(10,224)	(6,904)	(4,468)	(1,844)	(4,283)	(963)	2,777 (*)	(25,909)		(25,909)
Gross profit	**2,386**	**2,162**	**949**	**268**	**173**	**101**		**6,039**		**6,039**
Operating income (expenses)										
Selling	(613)	(69)	(36)	(25)		(32)		(775)		(775)
General and administrative	(810)	(553)	(197)	(133)	(94)	(373)		(2,160)	(13)	(2,173)
Other operating income (expenses), net	596	(345)	(35)	182	345	(82)	(111)	550		550
	(827)	**(967)**	**(268)**	**24**	**251**	**(487)**	**(111)**	**(2,385)**	**(13)**	**(2,398)**
Operating profit (loss) before equity results and finance results	**1,559**	**1,195**	**681**	**292**	**424**	**(386)**	**(111)**	**3,654**	**(13)**	**3,641**
Plus:										
Depreciation, amortization and depletion - continuing operations	1,038	974	303	91	27	38		2,471		2,471
EBITDA	**2,597**	**2,169**	**984**	**383**	**451**	**(348)**	**(111)**	**6,125**	**(13)**	**6,112**
Plus:										
Dividends received	46				8	896	(8)	942	143	1,085
Exceptional items										
Loss (gain) on sale of investments, net	4	(1)	(111)			(133)	111	(130)		(130)
Reversal for impairment - fixed assets	(8)	12	(41)			13		(24)		(24)
Gain by adjustment to fair value in deconsolidation of VTRM					(302)			(302)		(302)
Other	(15)					337		322		322
Adjusted EBITDA	**2,624**	**2,180**	**832**	**383**	**157**	**765**	**(8)**	**6,933**	**130**	**7,063**

(*) Relates to the net revenue from electric energy operations to CBA and VCSA.
(**) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

										2017
	Votorantim Cimentos	Nexa Resources	CBA	Steel (**)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Total, consolidated
Net revenue from products sold and services rendered	10,928	7,764	4,423	1,659	4,124	864	(2,963) (*)	26,799		26,799
Cost of products sold and services rendered	(8,726)	(5,543)	(3,773)	(1,430)	(3,873)	(789)	2,963 (*)	(21,171)		(21,171)
Gross profit	**2,202**	**2,221**	**650**	**229**	**251**	**75**		**5,628**		**5,628**
Operating income (expenses)										
Selling	(578)	(59)	(24)	(22)		(18)		(701)		(701)
General and administrative	(807)	(500)	(205)	(89)	(82)	(289)		(1,972)	(41)	(2,013)
Other operating income (expenses), net	(207)	(409)	279	46	(258)	585	(589)	(553)		(553)
	(1,592)	**(968)**	**50**	**(65)**	**(340)**	**278**	**(589)**	**(3,226)**	**(41)**	**(3,267)**
Operating profit (loss) before equity results and finance results	**610**	**1,253**	**700**	**164**	**(89)**	**353**	**(589)**	**2,402**	**(41)**	**2,361**
Plus:										
Depreciation, amortization and depletion - continuing operations	956	856	318	108	16	71		2,325		2,325
EBITDA	**1,566**	**2,109**	**1,018**	**272**	**(73)**	**424**	**(589)**	**4,727**	**(41)**	**4,686**
Plus:										
Dividends received	67		51			371		489	51	540
Exceptional items										
Loss (gain) on sale of investments, net	(20)	(16)	(589)			(589)	589	(625)		(625)
Reversal for impairment - fixed assets	21		(44)			(71)		(94)		(94)
Compensation of energy assets	99							99		99
Fair value of biological assets						8		8		8
Other						113		113		113
Adjusted EBITDA	**1,733**	**2,093**	**436**	**272**	**(73)**	**256**		**4,717**	**10**	**4,727**

(*) Relates to the net revenue from electric energy operations to CBA and VCSA.
(**) Relates to long steel operations abroad (Argentina and Colombia).

36 Subsequent events

(a) Results of the offer to employees

As expected in the privatization auction, in January 2019, the indirect subsidiary VTRM acquired additional shares of CESP related to the remaining shares of the offer to employees, totaling an investment of R$ 210. After the results of the offer to employees, VTRM to hold a 40.0% stake in CESP, equivalent to 93.5% of the voting common shares.

(b) Offer of Tender and Exchange Offer of debt by VCI

On January 10, 2019, the indirect subsidiary VCI announced the tender offer ("Tender Offer") of its euro bonds maturing in 2021 and 2022 and its US dollar bonds maturing in 2041 On February 14, 2019, the repurchase transaction was settled, with the principal amount of EUR 61 (R$ 269) of the issuance maturing in 2022, EUR 152 (R$ 673) maturing in 2022 and USD 540 (R$ 2 billion) maturing in 2041, together with a total cash outlay of R$ 3 billion.

Concurrently with the Tender Offer, VCI announced the exchange offer of its US dollar-denominated bonds maturing in 2041 for a new issue of bonds from its direct subsidiary St. Mary's Inc. (Canada)), maturing in 2041 and annual coupon of 7.25%. However, the transaction did not meet the minimum conditions stipulated in the offer and was not made.

(c) Conclusion of Fibria Celulose S.A. sale

On January 14, 2019, Suzano Papel e Celulose SA ("Suzano") and Fibria (together with Suzano, the "Companies") jointly made public and in addition to information previously disclosed by the Companies in the relevant facts, informing its shareholders and the market in general that, on this date, the corporate reorganization object of the Voting Commitment and Assumption of Obligations entered into on March 15, 2018 was completed, with the effective combination of operations and shareholding bases of Suzano and Fibria, pursuant to the protocol and justification executed on July 26, 2018 and approved by the shareholders of the Companies at meetings held on September 13, 2018.

(d) Early settlement of 4131 loans and bonds

On January 23, 2019, the Company prepaid all principal plus interest on its bonds, signed on March 25, 2013, maturing on September 25, 2019, which were guaranteed by the subsidiary VCSA in 50% of the value. The total value settled by the VSA was R$ 809 (USD 216).

On February 14, 2019, the Company prepaid the loan agreement related to Resolution 4131/1962, in the amount of R$ 187 (USD 50), signed on May 14, 2015, with maturity on May 14, 2020.

On February 25, 2019, the Company prepaid the loan agreement related to Resolution 4131/1962, in the amount of R$ 386 (USD 102), entered into on February 24, 2017, with maturity on January 21, 2021.

(e) ICMS on the basis of calculation of PIS and COFINS

In February 2019, there was recognition of the decision in another lawsuit of the subsidiary VCSA, regarding the thesis of exclusion of ICMS on the basis of calculation of PIS and COFINS, registering a credit the amount of R$ 401. In addition, the subsidiary VCSA proceeded with the collection of the judicial deposit that was linked to another lawsuit, whose final res judicata occurred at the end of 2018, in the amount of R$ 346 (Note 1.1 (h)).